Goulstonian Lectures

ON THE

CHEMICAL PATHOLOGY OF DIPHTHERIA COMPARED WITH THAT OF ANTHRAX, INFECTIVE ENDOCARDITIS, AND TETANUS.

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LECTURE III.

THE specific action of the diphtheria products is brought into greater prominence when it is contrasted in parallel experiments with the chemical bodies found in anthrax and in infective endocarditis.

Infective endocarditis.—The case of infective endocarditis examined was under the care of Dr. Cayley at the Middlesex Hospital, and I performed the post-mortem examination when I was pathologist to that hospital. The history of the case may be briefly stated. The patient was a young unmarried woman, aged twenty-one years. The illness began eight weeks before death with pain in the left breast, and was characterised by wasting and intermittent fever during the six weeks' stay in the hospital. The temperature rose to 103° or 104° F. every day, and only once did shivering occur. The cardiac signs were those of double mitral disease. Four weeks before death the right brachial artery became plugged by an embolus, and three weeks before death the left femoral. Albuminuria occurred four weeks before death. At the post-mortem examination, twelve hours after death, there was chronic disease of the mitral valve, with fungating vegetation spreading over the endocardium of the left auricle, and ulcerated on the surface. The blood was imperfectly coagulated, and was lakey in colour. There was a recent embolus in the left middle cerebral artery, and older emboli (surrounded by organising thrombus) in the right brachial and left femoral arteries, while at the origin of the superior mesenteric artery there was a softening embolus. The right kidney showed two scars of old infarcts, and there were two caseated infarcts in the spleen. The spleen was greatly enlarged, dark, and congested. The liver was fatty, the kidneys fibro-fatty, and the lungs œdematous. This was, then, a case of ulcerative endocarditis not associated with abscesses or pyæmia. The mitral valve was examined microscopically and the blood and spleen chemically, while cultivations were made from the blood and from the vegetations on the mitral valve. Microscopically the mitral valve showed the fibrous thickening of chronic disease with recent vegetations capped by fibrin. A section of the free edge of the vegetations showed the fibrils of fibrin capping the thickened connective tissue containing collections of round cells. Along the free edge of the fibrin was a fringe of micrococci, very thick and invading the fibrin. Outlying clusters of the cocci were also present, and in some parts the micro-organisms were seen in groups in the tissue of the valve itself. In some parts of the valve the cocci were present in the valve tissue itself in the form of clusters. In this case, then, the micro-organism has for its culture medium the fibrin capping the vegetations.

Bacteriological examination.—No micro-organisms were found by making cultivations of the blood of the right ventricle. From the vegetations, with proper precautions, a pure cultivation was at once obtained of cocci with the same microscopical appearances as those seen in the valves—viz., they were cluster or staphylo-cocci, and not streptococci. Only one culture out of the five made showed any contamination; four were pure, and showed only the growth of the staphylococci. Without going further into the bacteriological procedure, this organism may be described as growing on agar in bluish-white opaque circular colonies, and on gelatine in a similar manner, but rapidly liquefying the medium. Microscopically it is a staphylococcus, forming clusters and not chains.

Pathological action.—This coccus does not produce pus when introduced under the skin of a guinea-pig or into the circulation of a rabbit. In a guinea-pig it produces a febrile disorder lasting over eleven weeks, accompanied by extreme wasting and ending in death. When injected into the circulation only a slight illness results, from which the animal recovers. When killed, no micro-organisms were discovered in the blood. The pathological effects of this micro-organism have yet to be completely worked out. I contented myself as a commencement in determining what sort of illness it produced in animals and whether it formed abscesses. The kind of illness produced, and the absence of abscesses when subcutaneously introduced, showed that it had the characteristics of the coccus found in the valves of the heart. Each case of infective endocarditis must be studied by itself, for the disease is by no means an entity. Some cases of ulcerated cardiac vegetations occur as part of a pyæmia proceeding from pelvic or other abscesses, where the primary infective agent appears to be the staphylococcus or streptococcus pyogenes. In others, again, no primary pus focus is found, but there are multiple abscesses due to infective emboli from the ulcerated valves. Other organisms, such as Friedländer's pneumococcus, may also possibly play a part in the disease. In the case under consideration, however, there was only one micro-organism, and that one not a pus former.

Chemical examination.—A chemical examination was made of the blood and spleen by the same methods I have already described. The result showed that the same two classes of products are present in the blood and spleen as in anthrax and diphtheria—viz., digested proteids or albumoses, and a non-proteid product, which when first separated and purified is strongly acid. The albumoses are proto- and deutero-albumose, chiefly the latter, indistinguishable by chemical reactions from the similar bodies we have already discussed. The final product is separated by alcohol and purified by precipitation with ether and treating with chloroform. It is an amorphous, yellowish-brown body, with a strongly acid reaction. The amount of the products is seen in the following table:—

In Infective Endocarditis.

	Albumoses.	Alcoholic Extract.
From blood	0·236 gramme	Trace
From spleen	6·705 grammes	1·29
Total	6·941 grammes.	

The large amount of albumoses and alcoholic extract present in the spleen is remarkable. Here, again, as in diphtheria and anthrax, the spleen is the repository and manufactory of the chemical poison.

Physiological action of the albumoses.—The physiological action of the albumoses was tested side by side with that of anthrax albumoses while the experiments on diphtheria were progressing, so that the animals could be compared. The albumoses of infective endocarditis are producers of fever and retard the coagulation of the blood. The effect of the intravenous injection of a dose of 0·122 gramme per kilogramme of body weight is with the anthrax albumoses a great rise of temperature, lasting for three days; with the infective endocarditis albumoses the fever produced is much less marked. With a larger dose (0·2 gramme per kilogramme of body weight) the fever in the case of the anthrax albumoses is not so well marked; while in the case of the albumoses of infective endocarditis it is more marked than with the smaller dose. With a still larger dose (0·3 gramme) the anthrax albumoses cause only a slight rise of temperature, succeeded by a fall and death in two hours; while the albumoses of infective endocarditis cause a moderate rise of temperature, which is continued for two days. The anthrax albumoses, therefore, are much more toxic than those from infective endocarditis. The fever produced by them is well marked with a small dose, but with larger doses it is less, and with a lethal dose it is very slight indeed. In the experiments just described there is no paralysis produced, but wasting is observed in some of the animals.

Alteration in Weight.

Dose per kilogrm. of body weight.	Anthrax albumoses.			Albumoses of infective endocarditis.		
	Gain.	Loss.	Time after inoculation.	Gain.	Loss.	Time after inoculation.
0·122 grm.	200 grm.	—	28 days	—	90 grm.	16 days
—	—	—	—	30 grm.	—	28 days
0·2 grm.	—	530 grm.	12 days	100 grm.	—	11 days
—	—	80 grm.	102 days	652 grm.	—	102 days
0·3 grm.	Death in 2 hours			70 grm.	—	10 days
0·153 grm. (in 3 doses)	—	—	—	85 grm.	—	100 days
0·122 grm. (in 3 doses)	—	130 grm.	4 days	210 grm.	—	4 days
—	—	1020 grm.	42 days	—	—	—

These figures show that the anthrax albumoses produce a greater effect on nutrition than those of infective endocarditis. When multiple doses of these products are given, fever is produced but no paralysis, contrasting greatly with diphtheria products. The effect on the temperature of three doses of anthrax albumoses on successive days = 0·122 gramme per kilogramme of body weight, and of the albumoses of ulcerative endocarditis, also in three doses, = 0·153 gramme per kilogramme of body weight. A rise of temperature each day followed the injection, which was continued for one day after the last inoculation. The anthrax animal died in forty-two days, having lost two-fifths of its body weight, while the ulcerative endocarditis animal showed no loss of weight, and was killed on the fifty-third day. This last was an adult animal; a young animal injected with the same dose of endocarditis albumoses died on the third day after the last injection.

Post-mortem examination.—The post-mortem examination of the animals that died or were killed showed the absence of any pathogenous micro-organisms. A microscopical examination of the phrenic nerves and of the motor nerves was made, and revealed no morbid condition, no nerve degeneration such as was observed in the case of the diphtheria products. The contrast with diphtheria is therefore well marked. Fatty degeneration of the heart was found in some of the animals, especially those which had been inoculated with the anthrax albumoses, and the animal which had the largest single dose of the albumoses from infective endocarditis. This fact helps to explain the fatty degeneration of the heart following the injection of the diphtheria products. Occurring in the animals inoculated with anthrax and ulcerative endocarditis albumoses, it tends to show that the fatty degeneration is due to an effect on the nutrition of the heart by the albumoses circulating in the blood stream.

Tetanus.—The case of tetanus examined was under the care of Mr. Hulke at the Middlesex Hospital. It was a typical case of acute tetanus following a penetrating wound of the sole of the foot caused by a nail. The symptoms began the week after the accident, and death, which occurred ten days after the accident, was preceded by frequently repeated tetanic spasms. The post-mortem examination showed nothing definite. A chemical examination of the blood was made, and 0·5972 gramme of albumoses (chiefly deutero-albumose) was obtained with a small quantity of a body soluble in alcohol and precipitated by ether. The albumoses, when injected into the circulation of a rabbit in the dose of 0·143 gramme per kilogramme of body weight, produced, not a rise, but a fall of temperature on the day of experiment. For two or three days the animal was quite well, but it then began to waste, so that on the twelfth day it had lost one-sixth of its body weight. It died on the twenty-first day, having lost nearly one-half of its original weight. This progressive wasting brings the tetanus albumoses into relation with those found in diphtheria. The completion of this subject I must leave for the present.

GENERAL CONSIDERATIONS.

Having now brought forward the facts in the chemical pathology of the infective disorders—diphtheria, anthrax, and ulcerative endocarditis—chosen for investigation, it is necessary to consider generally the bearing of the results. In summing up the effect on the body of the introduction into it or upon it of a primary infective agent, the symptoms may be referred to two causes—(1) mechanical, (2) chemical. The mechanical effects are illustrated by the fact that the infective agent may, as in diphtheria, produce a membrane which spreads down the air passage and endangers life. The effect of this mechanical obstruction—which is to some extent relieved by intubation or tracheotomy—is well recognised as a danger in diphtheria. Another example of mechanical effect is seen in infective endocarditis, in which not only do the fungating vegetations interfere with the proper action of the heart, but the emboli broken off from them, by plugging large vessels, cut off or diminish the blood-supply to a part, and so lead to grave results. Although such mechanical effects may be looked upon as merely pathological accidents, their consequences have to be considered in dealing with the pathology of these diseases. They sink, however, into comparative insignificance when the *rôle* of the chemical products of the primary infective agent is elucidated. What has been made clear to me during the course of the research, and what I have attempted to bring before you, is that these chemical products are specific in their action; that inasmuch as the bacillus anthracis is separable from other pathogenous micro-organisms as producing a definite disease (anthrax), so are the chemical products of the bacillus separable to a certain extent chemically, to a greater extent physiologically, from those formed by other pathogenous micro-organisms. Similarly with diphtheria, the bacillus diphtheriæ produces products differing in their physiological action from those found in anthrax and in infective endocarditis. The specific primary infective agent produces, therefore, specific chemical products by means of which it acts. It is evident from this that we have another basis for the study of infective disorders, in addition to the purely bacteriological one which is the study of the primary infective agent. The following now well-known bacteriological rules are recognised to prove that a particular micro-organism is the cause of a disease: (1) It must be found always associated with the disease; (2) it must be separated from the diseased tissues in pure culture; (3) it must be injected into susceptible animals, and reproduce the disease; (4) it must be again obtained from this experimentally produced disease. To this I would add another—viz., that the chemical poison must be obtained from the tissues in the natural disease, and products with a similar physiological action proved to be formed by the primary infective agent when grown outside the body. This will no doubt aid progress in pathology; because in some instances, as in cholera and leprosy, animals susceptible to the disease are not forthcoming. If, for example, it be definitely proved that certain chemical poisons with a specific action are present in the bodies or evacuations of cholera patients, and if the vibrio choleræ asiaticæ produces the same products, then we must look upon this micro-organism as the cause of the disease. It is possible that in some infective disorders, such as measles, scarlet fever, and small-pox, in which the primary infective agent is as yet unknown, a chemical examination of the tissues on the lines laid down may aid in the discovery of the living contagion. In this way, too, it will be possible to decide whether such a disease as has been described as membranous croup of the larynx really exists. There is no evidence at present that there is any disease other than diphtheria which can produce a false membrane in the larynx. And now that it is definitely known that diphtheria is a disease caused by the bacillus diphtheriæ, and that the chemical substances found in it are readily recognisable by the fact of their producing a definite nerve lesion, it will be possible for any observer who has a case of membranous croup under observation to separate the chemical substances from the "croupous" membrane, or from the body after death, and to decide their nature. I should like to insist on the point that, in studying the chemical pathology of an infective disorder, it is not sufficient to investigate the artificial chemical products of the primary infective agent; a chemical examination of the tissues of persons dead of the disorder must also be performed. The great importance of this is shown by one fact which has been brought out in these experiments—viz., the pathological *rôle* of the spleen.

Rôle of the spleen.—The spleen is an organ with an obscure physiology and a still obscurer pathology. Anyone who has tried to understand what has happened to a spleen in a case of infectious disease must have been struck with the utter hopelessness of coming to any definite conclusion regarding that organ from a merely physical examination. From the physiological point of view, it is known to undergo certain mechanical changes which can

only be of slight import, and (besides being a birthplace for white blood cells) to contain in comparatively large amount the crystalline products of the breaking up of proteids, such as uric acid &c. The chief point about the organ, however, from a pathological point of view, is that the blood flows through the walls of the vessels into spaces; then we have a more or less stagnating fluid, the proteids of which can be digested either by micro-organisms or by ferments. In anthrax and infective endocarditis this organ is greatly enlarged; in diphtheria it is usually normal in size. In all three cases it is the proteids of the spleen from which the specific poisonous products are mainly formed; they serve as the food of the infective agents, primary or secondary.

Food for the infective agents.—Besides the spleen, there are other parts of the body in which the primary infective agent finds suitable media in which to grow. Thus pathological effusions, whether already present in the body or formed by the primary infective agent, are suitable culture media. These effusions, speaking generally, may be considered as slightly alkaline solutions of proteids which are outside the active metabolism of the body—i.e., the proteids are not in a living fluid like the blood. The bacillus anthracis, for example, when injected under the skin of an animal forms this effusion by its products, and thus provides its own culture medium. The interstitial fluids of the tissues of the body, containing as they do the amount of proteid, sodium chloride, and phosphates necessary for the growth of the primary infective agent, probably serve as culture media. Lastly, in diphtheria and in infective endocarditis, fibrin serves as the medium in which the micro-organism flourishes. In diphtheria the false membrane is composed of fibrin, which, as I have shown, is in a state of digestion, and the exudation of this fibrin is no doubt produced by the earliest products of the bacillus diphtheriæ. In the case of infective endocarditis which I have brought before you, the nidus of the micro organism was formed by the fibrin capping the vegetations. Without a suitable medium the primary infective agent cannot develop, cannot produce its poisonous products.

Products formed by the primary infective agent—I have attempted to make clear the fact that in these infective disorders the primary infective agent or living contagion produces its effect in man by means of its specific chemical products, which it forms from the proteids of the body with or without the intervention of a ferment. It may be that in all cases the chemical substances are produced by means of an unorganised ferment excreted by the primary infective agent; but the point that concerns us is that in only one of the diseases examined—viz., diphtheria—is there any evidence to show that this ferment plays a direct pathological *rôle*. In this disease, in which the bacillus diphtheriæ is limited to the superficial parts of the membrane, and does not diffuse itself throughout the body, it was seen that there was something excreted by the bacillus and absorbed into the body, in the tissues of which were digested products. This excretion of the bacillus was looked upon as a ferment, and was called the "secondary infective agent." In anthrax and infective endocarditis, on the other hand, the primary infective agent is in the body itself, and there is no evidence that a ferment plays any direct part in the causation of the symptoms of the disease. I very much suspect that in tetanus, a disease which resembles diphtheria in the fact that the primary infective agent is limited to the site of inoculation, a ferment or excretion of the bacillus acts as a secondary infective agent. But this is quite undecided. The secondary infective agent cannot be expressed in any chemical terms: only in terms of what it can accomplish, either (1) of its physiological action, or (2) of its capacity for forming from proteids chemical bodies which resemble it in physiological action. The secondary infective agent is one possessing properties which, like those of unorganised ferments, are usually expressed by the term "vital": it is, as it were, one of the vital properties of the living cell cast off in a form which is unorganised.

Products of the infective agents, primary and secondary.—The products of the primary or secondary infective agents are chemical bodies belonging, as I have shown, to two groups, a proteid and non-proteid. The proteid form the class of digested proteids or albumoses and peptone; the second group are final products from the digested proteids and are analogous to the leucin and tyrosin of pancreatic digestion. The organic constituents of the body consist of proteids, carbohydrates, fat, and certain so-called extractives, which, like urea, uric acid, &c., are nitrogenous and the result of proteid metabolism. There is no evidence at present that pathogenous micro-organisms can form from fats and carbohydrates poisonous bodies; they may break them up, but the chemical bodies produced have little physiological action, while the proteids are substances which, from their enormous molecule and from the presence of nitrogen, are capable of being split up into poisonous bodies. The chemical difficulty with proteids is that there is no knowledge of the size of their molecule and, what is of great importance, of their molecular construction. The percentage composition gives no idea of the size of the molecule, and the only idea we have of the molecular constitution of a proteid is from a study of the chemical constitution of the nitrogenous bodies resulting from its destruction. It is not, therefore, surprising that with regard to the first class of poisonous products under consideration—viz, the albumoses—no very definite chemical knowledge is forthcoming, and that, as I have stated, all the albumoses I have been describing give the same chemical reactions. An ultimate analysis to determine the percentage composition is of little value in the case, as it is the molecular constitution we wish to know. We have, therefore, to express the albumoses in terms of their physiological action and to be content with demonstrating that the diphtheria albumoses differ from peptic albumoses and those found in anthrax and in infective endocarditis, in producing a paralysis consequent on a nerve degeneration, and that the anthrax albumoses are more poisonous than those of infective endocarditis.

The chemistry of the final products.—The anthrax base, the organic acid in diphtheria &c., is, however, a subject which will probably yield very fruitful and definite results. Such an investigation is, perhaps, one of the most difficult in organic chemistry. For us, as physicians and pathologists, the physiological action of such substances is of more importance than their chemistry; but as they are factors in disease and in some diseases the chief factors, the more complete our knowledge of them, the more likely will the means be found to combat them. In anthrax, for example, it is the final product, the alkaloid, which is the cause of death,—the albumoses play a very subsidiary part in the production of the fatal result. In diphtheria, on the other hand, the albumoses play the more important *rôle*, while the organic acid has only an insignificant action. There may, indeed, be other diseases in some of which the albumoses play the chief pathological *rôle*, in others the final product, whether base or acid.

Comparison with other poisons.—These poisons found in infective diseases do not stand alone; they are related to others found both in the vegetable and animal kingdoms. Albumoses (which I have called phytalbumoses) are widely spread in vegetable tissues; they exist in the seeds, and probably other parts of plants. Alkaloids or bases are also obtained from plants, and it appears to me a very promising field of research to determine whether the vegetable alkaloids are associated with digested proteids—whether, in fact, the vegetable cell produces, like the bacillus anthracis, two classes of products, the albumoses and a base. This is, however, a question for the vegetable physiologist. In some seeds (abrus precatorius and ricinus communis) there are proteids which have a distinct and powerful poisonous action. In the jequirity seed, for instance, there are, as I have shown, two poisonous proteids, a globulin and an albumose, both of which produce in very small doses a general disease, two of the features of which are the production of ecchymoses and the occurrence of sanguineous diarrhœa. The jequirity proteids resemble in many respects those of snake venom, and are like the albumoses of diphtheria and of infective endocarditis in producing a watery diarrhœa. I think, indeed, that the jequirity poison more closely resembles the secondary infective agent in diphtheria than any other poison I know, as it partakes of the nature of a ferment in its ready destruction by heat. Whether it produces a peripheral nerve degeneration or not I do not know.

Summary of the action of the poisonous products in infective disorders; effect on the blood and on nutrition.—One of the effects common to many of these proteid poisons is their power of preventing or hindering coagulation of the blood. This we have seen to be the case with the diphtheria albumoses, the effect of which in this respect is well marked, and lasts a long time after they have been injected

into the circulation. The albumoses of infective endocarditis also have this power, which is likewise possessed by the albumoses of peptic digestion, by the jequirity poison, and by many kinds of snake venom. This action shows that these poisons have a profound effect on the blood, and may account for the grave defects in nutrition which have already been described. The animals poisoned with the diphtheria or anthrax albumoses go on wasting after the fever has subsided, the loss of weight being greatest in the case of the diphtheria products, and proportional to the dose of the poison given. Tetanus albumoses may be classed with diphtheria as producing great wasting; while anthrax albumoses are less effective in this respect, and those of infective endocarditis least so. In connexion with this, there is the fatty degeneration of the cardiac muscle which has been shown in these experiments to follow the injection of not only the diphtheria products, but also, although to a less extent, the albumoses of anthrax and of infective endocarditis. There is no definite evidence that cardiac degeneration is directly dependent on a nerve lesion, either central or peripheral; and the fact that it is well marked after the injection of the anthrax albumoses which produce no degeneration in the nervous system points, in my opinion, to the conclusion that it is to the change in the blood which these poisons bring about that we must ascribe the fatty change. This fatty degeneration may, indeed, be only the final result of the poisons being special cardiac poisons. The skeletal muscles do not become fatty like the heart, unless there be nerve degeneration, as in diphtheria.

Effect on the body temperature.—From the experiments which have been described it is clear that the proteid products (albumoses) of the primary infective agents have a profound effect on the body temperature. Ott and Calmar first showed that ordinary peptic albumoses caused a rise of body temperature, and several observers have at various times investigated the effect of injecting into animals "septic material" freed from micro-organisms. These last experiments were performed at a time when the chemical characteristics of the products of pathogenous micro-organisms were unknown. The time has passed by for using impure material for physiological experiment. The most typical effect on the body temperature is seen in the case of the anthrax albumoses. A medium dose produces a rapid and high rise and a continuation of the fever for some days, a larger dose produces a less pronounced rise and a shorter duration of the fever period, while a still larger dose causes only a slight rise of temperature and a sudden fall, ending in death. The albumoses of infective endocarditis are less active in producing fever, while those of diphtheria and tetanus may be classed together, inasmuch as in medium doses they produce a fall of temperature. Diphtheria albumoses will produce fever, while those of tetanus, as far as has been ascertained, produce only a depression of temperature. It is a noticeable fact that it is the albumoses or proteid products of the infective agents, and not the final products, whether base or acid, that have the effects on the blood, on the temperature and on nutrition, that have been described.

Effect on the nervous system.—Many of these poisons select the nervous system for their action. One of the features of the action of albumoses is the production of coma, and in anthrax this coma is the special action of the base or alkaloid. Coma is a feature of jequirity and of snake poisoning. The final action of the albumoses in diphtheria is the production of coma, but their special action is to produce a paralysis dependent on nerve degeneration. It is quite possible that other products from diseases will be found to produce a peripheral palsy. The effect on the respiration which is observed in snake poisoning is ascribed to the action of the poison on the central nervous system, and when working at jequirity I came to the conclusion that its action on the respiration was also central. In diphtheria, however, where there is peripheral degeneration of the phrenic nerve, it is difficult to say how far the respiratory attacks are dependent on the peripheral degeneration, and how much they are due to an effect on the centres of respiration. Apart from mechanical obstruction, dyspnœa is one of the features of diphtheria in its acute stage, and it is possible that it may be due to an effect on the central nervous system; but here, again, it is difficult to exclude a peripheral action on the phrenics, for, as I have shown, the diphtheria products are special nerve poisons, and they may cause degeneration of the nerves even during the short course of the acute disease.

Question of immunity produced by the chemical products.—There is one question which I have left untouched—viz., that of the conferring of immunity against the disease by the means of its chemical products. This is, of course, an important effect. We have been considering the chemical products of an infective disorder or of the primary infective agent as specific in reproducing when injected into animals the symptoms of the disease. But it is evident that, if the chemical products are capable of protecting an animal against the invasion of the primary infective agent, this action must be essentially a specific one. For example, we could not suppose that the chemical products of anthrax would protect against diphtheria, or those of diphtheria against anthrax, but that only the products of anthrax could protect against the invasion of the bacillus anthracis. I wish to speak of the matter only in a general manner. I am, however, not at all sure that in all diseases there is this protection; I cannot conceive how the products in diphtheria could protect against the acute disease. In discussing the chemical products formed by the primary infective agent outside the body or in the natural disease, I have not mentioned any substances except those that are effective in producing the symptoms of the disease. There are some who have considered that such chemical products may consist of a "vaccine" and a "toxine." There is not the slightest evidence of this. There is no evidence of the existence of any chemical "vaccine" separable from the chemical "toxine," and I need, perhaps, hardly point out that such a "vaccine" has never been isolated. It was a term invented to explain phenomena which were not properly understood. There is also no evidence that there is any particular chemical substance which stops the growth of a pathogenous micro-organism. When grown in a flask it will not develop indefinitely, and it stops not because there is an anti-toxine formed, but because it is choked by its own chemical products in the same manner as peptic or tryptic digestion may be inhibited by the accumulation of the digested products.

In bringing these lectures to a conclusion I wish to say that the work was done for the Local Government Board, and to express my thanks to the medical officer for granting me permission to bring the subject before this College.

PULSATIONS AND MURMURS IN THE GREAT VEINS OF THE NECK:

THEIR PHYSIOLOGICAL AND CLINICAL SIGNIFICANCE.

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(*Concluded from page 741.*)

WE will now pass at once to consider certain characters belonging to venous murmurs heard at the root of the neck—characters which we have not examined in the preceeding sketch. The venous bruit, as heard in the internal jugular, has for the most part the character of a continuous bruit—i.e., the whole of the cardiac cycle between two succeeding beats of the carotid is filled up with a humming, or cooing, or purring sound, but if carefully listened to it is possible in most cases, and easy in many, to recognise that the sound varies in intensity: and that the variations follow each other in a sequence, which, on further investigation, is found to be of double rhythm—respiratory and cardiac. The respiratory rhythm shows a remission of the bruit during each expiration, an augmentation during each inspiration. The explanation of this phenomenon is not far to seek, for each inspiration facilitates the flow of blood into the chest, each expiration impedes it. The other sequence, of cardiac rhythm, concerns us chiefly, and we think that on the whole it is the more easy of recognition and the more common of occurrence. It shows two augmentations and two remissions during each cardiac cycle. What may be their explanation? The first step towards answering this is to time the phases of the bruit, and with a little care we succeed in this, and find that one augmentation falls in with the ventricular systole, the other with the ventricular diastole. It will be found most con-

venient to time the phases of the venous bruit by means of the pulse in the carotid of the opposite side of the neck. The remissions are sometimes so marked that the augmentations are heard as a double bruit; sometimes, indeed, especially in some postures, the murmur is actually double, there being a complete intermission.

The posture which favours intermission of the bruit is the recumbent. In many cases of anæmia it is possible, by making the patient lie quite flat, to convert the continuous bruit into an intermittent one. The mode of production is evidently the removal of the factor gravity. As a whole, the bruit is more faint in the recumbent position, and it may disappear altogether. What statements do we already possess concerning the remittent character of the venous bruit? We refer to a remission of cardiac rhythm. Hope[1] described the venous bruit as continuous if arterial pulsation were slight, as discontinuous if it were forcible. The bruit in the latter instance showed systolic exacerbations, and the explanation given by Hope was that this was due to the superaddition of the arterial whiff to the continuous venous murmur. He maintained that he could distinctly hear the arterial bruit through the venous sound, recognising the former by its higher pitch. We have no doubt that his explanation will hold good of some cases, and that, especially if rather heavy pressure be used, the arterial whiff may associate itself with the venous bruit and appear as an exacerbation; but we are equally certain that in the majority of cases the systolic element belongs to the vein alone, and the decisive proof of this is to be obtained by compressing the vein above, the murmur ceasing at once. Parrot[2] described the venous bruit as a *bruit à double courant* (p. 656), and he says (p. 664) that most authors have analysed the bruit (venous) into two parts. According to him, one augmentation falls in with the ventricular systole, which, as he points out, coincides in time with the auricular diastole. This murmur he regards as a direct bruit occurring during the flow towards the heart. The other bruit (or augmentation) he makes presystolic, and he regards it as a bruit of reflux due to the auricular contraction. Parrot's observations referred to the venous bruit of health or of anæmia. Bamberger's cases[3] are pathological cases with dilated right heart and probably insufficient tricuspid; they do not apply here, but we may mention one case in which a rough systolic bruit and a weak diastolic bruit were heard over the veins of the left side of the neck, because of Bamberger's remark that he was struck since he had never heard a diastolic venous bruit.[4] Friederich,[5] who also limited himself to pathological cases, seems to confirm Bamberger's remark as to the rarity of a diastolic venous bruit, since he mentions only two cases of such—viz., one of Graves' disease and one of aortic regurgitation, and explains them in an exceptional manner. Walshe[6] states that the venous murmur may be remittently continuous, "undergoing reinforcement and weakening at regular intervals," but he does not discuss the time of these reinforcements.

Of more recent authors we find that Balfour, describing chlorosis,[7] says: "The venous murmur is continuous and audible both during systole and diastole, its intensity increasing with the thoracic and cardiac aspiration, and diminishing with expiration and the cardiac systole, so that the venous hum swells and dies as these alternate." He thus describes the double, respiratory, and cardiac rhythm of the venous bruit, and since the venous hum is said to lessen with the cardiac systole, it must augment during the diastole; he describes therefore a diastolic exacerbation. Gee[8] speaks of the venous bruit as subject to rhythmical increase of loudness both during the inspiratory draught from out of the veins and during the ventricular systole—i.e., during the auricular diastole. Guttmann[9] says the venous bruit is increased during ventricular diastole, and should be diminished during systole, but that the systolic decrease is not only not demonstrable, but that an actual systolic increase is audible. This systolic increase he explains like Hope—viz., as due to the superaddition of a carotid whiff. Landois[10] describes the venous bruit as rhythmically increasing during the diastole of the heart or during inspiration.

These references may suffice to show that no definite settled teaching prevails as to the time of the phases or exacerbations of the venous bruit. Limiting ourselves to those of cardiac rhythm, these are recorded as systolic or as diastolic, or as both systolic and diastolic; in the latter case one augmentation occupies a special portion of the diastole—viz., the presystole. It is Parrot who says that the venous bruit is systolic and presystolic, and who adds that most observers have analysed it into two parts. Whether this is the fact or not—viz., that most authors have so analysed it,—we are in complete accord with him that the bruit shows a double element, and that its rhythm is systolic and diastolic; but we differ from him in making the diastolic augmentation follow instead of precede the systole. Perhaps one element of confusion has been the presence of a respiratory rhythm as well as of a cardiac rhythm, for it is clear that the opposing influences of inspiration and expiration must at one moment assist, at another hinder, the cardiac influences, according as an expiration or inspiration happens to coincide in time with systole or diastole. This objection is to be eliminated by suspending the respiration, but then a permanent obstacle is placed in the way of the venous current, and, according to Guttmann, the diastolic element of the venous bruit often becomes under these circumstances more faint, or actually disappears. In timing the phases of the venous bruit we have, however, made the patient hold the breath, and we maintain that even under these conditions it is possible in the majority of cases to determine a double rhythm, and that this is systolic and diastolic. We would again accentuate the point that actual intermission of the venous bruit is in many cases to be obtained by making the patient lie flat. The rhythm is thus more easily analysed. Will this observation, which we claim to be a matter of fact, fit in with physiological data? During the cardiac cycle there will be two points of time when the venous blood will find readiest access to the heart cavities: the first will be at the moment of ventricular systole, for this moment coincides in time with the *diastole* of the auricle which has just emptied itself into the ventricle; the second will be at the moment of ventricular diastole, for at this moment the distended auricle will be able to unload itself into the flaccid and empty ventricle. Nay, more, if the teachings of physiology be sound as to the development of a negative pressure in a cavity at the moment of relaxation, we shall have a suction force accelerating the flow into auricle and ventricle.[11] Be this as it may, there will be in any case least obstruction to the venous inflow at the commencement of ventricular systole and the commencement of ventricular diastole.

Discussing the pulsations of the veins of the neck, we have shown that in health and in anæmia there is no reason to believe that the blood current is reversed at any moment of the cardiac cycle; but that, on the contrary, the flow is always towards the heart, now more slowly, now more quickly. It is at the moments of quicker flow that the conditions for fluid vibration will best obtain, and hence whilst the continuous flow in one direction should manifest itself as a continuous hum, there should be, on *a priori* grounds, both systolic and diastolic augmentations of the same. Parrot's view of a reversal of the blood current in the presystole, due to the auricular contraction, is wholly unproved for quiet states of the circulation in health and in anæmia. But what about pathological states when, for instance, the right heart is overloaded through disease in the left heart or in the lungs? Here there is permanent overfilling of the great veins near the heart, and under these conditions we have seen that a pulsation in these veins due to actual back-flow from the full right auricle may obtain during the auricular and the ventricular contractions (presystolic and systolic). The pulsation, the systolic certainly, may be accompanied by a bruit, which will be caused by a regurgitant fluid vein; it was to this bruit that Bamberger drew attention. Does the distended right auricle ever

[1] Op. cit., p. 103.

[2] Archives Générales de Médecine, 1867, pp. 649, 650, et seq.: Étude sur le Siége, le Mécanisme, et la Valeur séméiologique des Murmures vasculaires inorganiques de la Region du Cou.

[3] Beobachtungen ueber den Venenpuls: Würzburger Med. Zeitschr., 1863.

[4] "Da ich noch nie ein diastolisches Venengeräusch gehört hatte."

[5] Virchow's Handbuch der Speciellen Pathologie und Therapie: article, Krankheiten des Herzens, vol. v., pt. 2, p. 96, 1867.

[6] Op. cit., p. 142.

[7] Diseases of the Heart, second edition, 1882, pp. 168, 169, et seq.

[8] Auscultation and Percussion, second edition, 1877, p. 182.

[9] Untersuchungs Methoden, fourth edition, 1881, pp. 324, 325. A little further on Guttmann also describes the venous bruit as intermittent; this is comparatively rare. The rhythm of the intermittent bruit is the same as that of the remittent bruit.

[10] Lehrbuch der Physiologie des Menschen, 1889, p. 187.

[11] According to this view the ventricular negative pressure would far exceed the auricular negative pressure, and therefore the diastolic bruit should exceed the systolic in force.

throw back its blood with sufficient force to create a bruit? We have not met with such a case, though theoretically it is of course possible.

In conclusion, let us point out that in quiet states of the circulation in health and in anæmia the continuous venous hum shows augmentations, systolic and diastolic, produced by accelerations of the onflowing blood; that at times the bruit may be actually discontinuous with systolic and diastolic phases, which again represent accelerations in the onflowing blood. Note, as characteristic of this, as we may term it, normal circulation that the *systolic augmentation* corresponds with the *collapse*, the *emptying of the vein*; that in pathological states marked by a full right side of the heart and distended veins a systolic venous bruit may be heard due to a wave of back-flow. Note, as characteristic of this abnormal state, that *this bruit* corresponds with the *systolic pulsation*, the *filling out of the vein*.

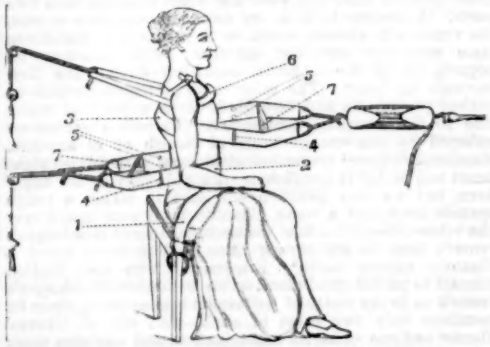
ON A METHOD BETTER THAN SUSPENSION OF APPLYING A PLASTER JACKET.

By RICHARD BARWELL, F.R.C.S.,
CONSULTING SURGEON TO CHARING-CROSS HOSPITAL.

CERTAIN drawbacks and inconveniences are connected with suspension of the patient while applying a plaster-of-Paris jacket; of these may be more particularly selected painful pressure on the jaw and occiput, as well as on the axillary plexus of nerves. The object of suspension is to straighten out the abnormal curve of the spine, so that the jacket when complete may be straighter than the unsupported back of the erect patient, thus preventing intervertebral pressure, and by successive applications correcting, as far as possible, the kyphosis or hump which must result if, such means being omitted, the diseased vertebræ synostose. Children, therefore, whose pelves and lower limbs are small and light, obtain little or none of such benefit; while adults with heavier lower developments may gain more temporary rectification, but can bear the pressure on the points of suspension a commensurately shorter time. Hence the plaster must be of such a quality as will set quickly; no gum or other colloid must be combined with it. The jacket must be completed with great rapidity, and not infrequently the patient must be taken down before hardening is so perfect as to obviate cracking and yielding; for, of course, when suspension ceases there is a tendency to recurrence of the curve, which a hastily applied jacket is too weak to resist. Much experience and practice may up to a certain point minimise these evils, but cannot eliminate them.

I have therefore for some years past ceased to employ suspension in kyphosis, and have straightened, as far as safety will permit, the patient's spine by a modification of my method of rachilysis, which, used differently, has proved successful in lateral curvature; the force—viz., traction by a system of pulleys—being used while the patient is sitting. It is thus carried out in a case of dorsal kyphosis: The patient being clothed in a skin-tight knitted vest, and with the usual parts padded, sits on an ordinary office stool about two feet and a half high, between two opposing walls in which certain hooks &c. are fixed, as for rachilysis. A three inch wide piece of webbing, with strong cords at each end, is secured to one of the back legs of the stool, and, passing over the top of the patient's thighs sufficiently tightly, is also secured to the other back leg (1). A strip of moderately strong unbleached calico, broad according to the size of the patient, crosses the abdomen on and below the umbilicus. This in the position under consideration I will name "counter-traction band." By means of the cord at each end it is fixed at the proper degree of tension behind (2). A similar strip of calico passes across the back on a level with the point of greatest curve. This is the "traction band" (3). If the projection be very sharp and angular, it is well to make a slit, lengthwise as regards the belt, two or three inches long, so that one of the laps may lie above, the other below the most prominent vertebra; a cord secured to both ends of this forms the whole into a loop, into which is hitched the hook of the system of pulleys. These two strips of calico would always crumple up and run into ropes as soon as tension comes on them unless prevented, which is easily done by having at hand four slips of common soft wood a little longer than the belts are broad. They are to be placed outside the calico pretty close to the patient's body (4), one on each side, and into them through the belts, and just at their edges, are thrust surveyor's pins (5). Lastly, a one inch wide loop of webbing, properly padded, passes across the manubrium sterni under the axilla on each side, and is secured by a cord running through a single pulley at proper tension behind (6). This I call simply the "lanyard." Now the surgeon begins by making very slight traction by means of the system of pulleys, observing if the tension of his other cords is correct, and places the spine in proper position; if not, it can easily be altered by means of the single pulleys through which the cords run. All being correct, he increases the tension, and slips between the laps of both traction and counter-traction bands a board of wood, from ten to twelve inches long, in order to prevent lateral pressure on the thorax and abdomen (7). He now increases traction up to the desirable point, recollecting that the Astley Cooper system of pulleys, which is that which I use, multiplies his manual force by six. When as much traction as he may deem safe has been attained, he fixes the pulley cord by twisting or knotting it to the loop of the traction belt, thus causing the spine to be immobile during application of the jacket.

As this sitting position and slight restraint are either not at all or but very little fatiguing to the patient, the next procedures need not be hurried. Moreover, in order to ensure greater hardness and durability to the jacket, some



colloid may advantageously be mixed with the water in which the bandages are soaked. The best and most convenient material I find to be liquid glue (Le Page's). About a teaspoonful to the quart of water causes the plaster to set very firm and hard in from twenty minutes to half an hour, according to the warmth of the room. In winding on the bandages those parts of the traction and counter-traction belts which lie close and tight to the patient's body must be included and covered in the turns; those parts which project and stand away from the trunk are left out. By putting on the bandages not straight but somewhat obliquely, the chest and abdomen may be covered, with the exception of some little triangular spaces lying under the shelter—the eaves, if I may use such a term—of the projecting parts; these are afterwards dealt with.

When the plaster has become firm the traction should be slowly relaxed, and the calico belts cut away about three inches from the trunk, and any little roughness in the angle where they begin to project removed. Then the triangular interspaces should be wetted and covered with plaster soaked in the gluey water. The calico lappets (the three inches not cut away) are then laid over the newly applied plaster and covered by rubbing into them the same material. If the surgeon has to deal with a dorso-lumbar, or with simply a lumbar kyphosis, the lower belt becomes the traction band, passes to the front, and is attached to the pulleys; the upper belt is then the counter-traction band, passing across the front of the chest as high up as one wishes, is secured behind. No lanyard is required.

The advantages of this method over suspension may be thus summed up. 1. Hardly any appreciable fatigue to the patient. 2. No painful pressure on any part. 3. The

amount of force employed in straightening the spine, instead of depending on such chance condition as the patient's weight, lies entirely within the surgeon's choice. 4. The surgeon may occupy what time he finds necessary in putting on the bandage, and can make a much more perfected one than when hurried. 5. The admixture of glue renders the jacket very durable and strong, capable of upholding a heavy much-curved trunk. 6. Less plaster is needed, therefore the jacket is lighter. 7. Bits and flakes of plaster do not chip away into the clothing and bed. 8. If a jacket removable by cutting down the middle be desired, a much more springy and less friable one, more easily taken off and put on without cracking, can thus be obtained.

Wimpole-street, W.

ON THE

PRESENCE OF URO-HÆMATO-PORPHYRIN IN THE URINE IN CHOREA AND ARTICULAR RHEUMATISM.

BY ARCHD. E. GARROD, M.A., M.D. OXON., F.R.C.P.

DR. MACMUNN[1] has shown that a pigment, closely resembling hæmato-porphyrin, to which he has given the name of "uro-hæmato-porphyrin," is met with in the urine of sufferers from a variety of morbid conditions, and is especially constant and abundant in that of rheumatic patients. This statement has been confirmed by Le Nobel of Leyden, and I have myself found this substance in almost every case of rheumatic fever out of a considerable number in which I have looked for it. I have also found that the pigment present in rheumatic urine usually shows the characteristic five-banded spectrum (described by Dr. MacMunn) in alkaline solution; although I am inclined to think that in some of my cases the substance present was ordinary hæmato-porphyrin. In acid solution the spectrum of uro-hæmato-porphyrin contains two bands and an intermediate shading, which I cannot distinguish from those of acid hæmato-porphyrin in dilute solution, and Dr. McMunn holds that there is also a band like the urobilin band. The amount present in the urine of rheumatic patients is rarely, if ever, sufficient to impart a characteristic colour to the urine, and, although in some cases the characteristic bands are seen on adding a small quantity of mineral acid to the urine, the presence of this substance can, as a rule, only be recognised by precipitating the pigments and making an acidulated alcoholic extract from the precipitate. Even in such extracts the quantity present is often insufficient to yield an alkaline spectrum, and when this is the case the recognition of the pigment rests upon the observation and measurement of the characteristic acid hæmato-porphyrin bands. Some recent observations by Salkowski[2] upon urines containing hæmato-porphyrin render it probable that the administration of sulphonal may cause the excretion of that substance; and it is therefore important to state that the occurrence of uro-hæmato-porphyrin in the urine in acute rheumatism is quite independent of the salicylic treatment; for I have found it in urine passed immediately after admission to hospital by patients who stated that they had as yet had no treatment for their disease, and whose urine gave no salicylate reaction. In the course of a systematic examination of morbid urines for hæmato-porphyrin pigments, I have obtained some results with regard to chorea which I venture to regard as sufficiently interesting to form the subject of a preliminary note. I have examined the urines of twenty patients suffering from chorea, and in fourteen of these have found uro-hæmato-porphyrin, sometimes in quantities such as are but seldom met with. The quantity of the pigment present appears to bear some relation to the severity of the case; but considerable amounts may be found in the urine of patients who have a persistently subnormal temperature. The analysis of the cases shows that the presence of uro-hæmato-porphyrin is most constant in cases in which there is reason to suspect a rheumatic taint. Of the twenty patients referred to, five had definite personal histories of articular rheumatism, and all of these were passing uro-hæmato-porphyrin in their urine—four of them in considerable quantities and one in traces only; two had doubtful histories of articular rheumatism, and both of these had uro-hæmato porphyrin in their urine—one in considerable and the other in unusually large amount; three had murmurs, but nothing else to suggest rheumatism, and of these—two were passing urine containing considerable quantities of uro-hæmato-porphyrin, one with a trace only; two had clear family histories of rheumatism, but no personal histories, and no murmurs—the urine of one of these contained a trace of the pigment, that of the other none. The remaining eight patients had no rheumatic family or personal histories, and no cardiac murmurs. Of these, three had uro-hæmato-porphyrin in their urine: one in unusual amount, one in considerable quantity, and one a trace only. The urine of the other five contained no uro hæmato-porphyrin when examined. Since the presence of the pigment in the urine is by no means peculiar to rheumatic cases, but is only an unusually frequent phenomenon in that disease, the above results, did they stand alone, would scarcely offer any evidence of the part which rheumatism plays in the causation of chorea; but, when they are taken in conjunction with the evidence derived from other sources, they must, I think, be acknowledged to supply a fresh link between these two conditions. This conviction gained in force from the fact that I have not obtained such results in other nervous disorders; but up till now my observations on the urine of patients suffering from such diseases are few in number, and it is quite possible that the results of a further search may tend to invalidate this argument. However this may be, I believe that the frequent occurrence of uro-hæmato-porphyrin in the urine of choreic patients affords evidence that one at least of the perverted chemical processes which accompanies rheumatic attacks is shared by chorea; and that it may be ultimately found that the presence or absence of this pigment affords a means more delicate than any which we yet possess of distinguishing which cases of chorea are due to the rheumatic taint and which own some different causation. In conclusion, I must express my thanks to Drs. Sturges, Barlow, Hadden, and Herringham, who have kindly allowed me to examine the urine from some of their cases of chorea.

Chandos-street, W.

[1] Brit. Med. Journ., vol. ii. 1883, p. 1060; vol. ii. 1888, p. 117. Proc. Roy. Soc., No. 208, 1880; Journal of Physiology, vol. x., p. 71.

[2] Zeitschrift für Physiol. Chemie, 1891, Bd. xv., S. 286.

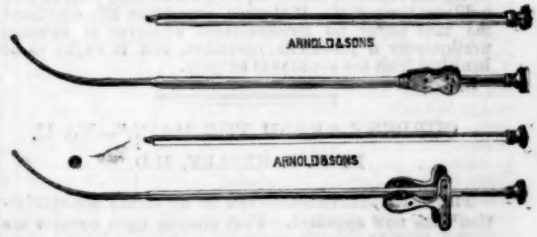
ON THE TREATMENT OF

STRICTURE OF THE URETHRA BY HOLT'S METHOD OF DILATATION,

WITH A MODIFICATION OF VOILLEMIER'S DILATOR.

BY SURGEON-MAJOR EDWARD LAWRIE.

FOR want of an instrument of precision, Holt's method of dilatation of stricture of the urethra has been to a great extent superseded by internal urethrotomy. This want has, I believe, been remedied by the introduction of a dilator fulfilling all the requirements of such an instrument, which Messrs. Arnold and Sons have made at my suggestion; and Holt's operation will, I trust, now take its proper position as in all probability the soundest and safest method of treating organic stricture. The instrument Messrs. Arnold



and Sons have made consists of a branching dilator constructed on Voillemier's principle. The branches, which are passed through the constriction as a No. 3 Lister's steel bougie, fit into two grooves in the dilator, so

that when it is introduced it dilates the stricture to the size and shape of No. 8 or No. 12. It is doubtful what the action of the old dilators generally was on the stricture. Probably they ruptured or split it in one or two directions; but they were faulty in that the branches were liable to separate to a greater extent than the size either of the dilator or of the urethra, and the splitting was consequently not confined in all cases to the stricture. There is no doubt as to the action of my instrument. It is confined to the stricture, which it dilates by multiple splitting or nicking. The first case in which it was employed, for the purpose of demonstration, was one of very tight stricture of the meatus; and after the dilatation the whole edge of the circumference of the stricture was nicked all round as regularly as if it had been done with a very fine knife. The splitting action of the instrument may vary in this respect, but it can have no injurious effect on the sound urethra. In internal urethrotomy, on the other hand, no skill on the part of the surgeon can confine the limits of the incision to the stricture; except by pure accident, the incision must commence and terminate in the sound urethra. The risks of internal urethrotomy as regards hæmorrhage, inflammation, and blood poisoning are therefore appreciably greater than those of Holt's dilatation with the new instrument.

In choosing between internal urethrotomy and Holt's or any other operation in the treatment of stricture of the urethra, surgeons are apt to forget that these procedures do not cure the disease. The cure of organic stricture is accomplished by the repeated passage of full-sized instruments, and the operative procedures merely shorten treatment or hasten recovery. They are beneficial by the precise amount of time they save in enabling the surgeon to pass a full-sized sound with safety. There are risks in internal urethrotomy due to the above-mentioned inherent defect in the operation which are not now encountered in Holt's operation. The only risk attaching to Holt's method is the possibility of urethral fever, which may arise from instrumentation of any kind when the urinary organs are diseased. The danger of urethral fever may be reduced to a minimum, however, by the use of tartar emetic, and a grain- or two-grain dose administered in suitable cases immediately before or after the dilatation of the stricture may be relied upon to control or prevent subsequent inflammatory or febrile disturbance.

It remains to be considered whether Holt's method of dilatation is applicable to the treatment of all strictures of the urethra. My experience is that it is effective in all organic strictures that are permeable by metallic instruments. I have always regarded it as a fortunate circumstance that I was strongly influenced against the use of soft instruments by seeing a false passage made in Paris in the year 1868. One of the most celebrated French surgeons of the day was trying to pass a soft instrument through a stricture, and while he was explaining to the students that it could not possibly do any harm, its point suddenly protruded through the patient's anus. From that day to this I have not attempted to use a soft bougie, and I have never met with an organic stricture through which a metallic instrument could not be passed. The case is different with traumatic stricture. The passage of instruments, which undoubtedly cures organic stricture, has no effect upon the traumatic disease. In traumatic strictures external urethrotomy by Wheelhouse's method is often a necessary operation; but no form of external urethrotomy is necessary in organic stricture unless the surgeon entirely fails to pass a dilator through it. Prolonged experience has convinced me that under no circumstances whatever is external urethrotomy a justifiable operation, and it ought to be banished from the practice of surgery.

Hyderabad.

CURRENT "FROM THE MAIN."—No. II.

BY W. S. HEDLEY, M.D.

THE instrument foreshadowed in my recent communication[1] has now appeared. That electric light circuits are easily available for electro-therapeutic purposes may be accepted as an established fact. The time therefore seems to have arrived to carry the inquiry a stage onward, and to ask, With what measure of safety? The danger is the possible influx of strong currents. It is clear that against this risk our ultimate protection at present must lie in the safety fuse or "cut-out." It seems to me also clear that with a really reliable "cut-out" between him and the mains the physician may, by suitable methods, handle electric light circuits without misgiving. But what is a really reliable "cut-out," and where is it to be found? I think it is not to be found in a large proportion of the ordinary fuses used in electric lighting. First, because in light installations a fuse that acts within from 5 to 10 per cent. of the normal current is considered to be safe and satisfactory—e.g., a fuse set to break at 1 ampère would be within a sufficiently close percentage if it acted at 1·1 or 0·9, a margin of possible variation amounting to 0·2 or 100 milliampères in 500. This is not sensitive enough for us. Secondly, in electric lighting it is the practice to insert a fuse whose breaking point is from 50 to 100 per cent. above the normal current. Thus, to protect a 3 ampère circuit a fuse marked to break at 5 would probably be used. This adds another element of uncertainty and danger.

We must have a device that will automatically break a small current circuit with unfailing exactness, or shunt the greater portion of any sudden influx through another circuit. On making known my requirements I have lately been supplied with the former, and I regard it as a most ingenious and reliable instrument. It can always be in full view of the operator, can be set to exact requirements, can be tested at any time, its working parts are of the simplest description, and, set as it is now, it breaks circuit with unerring accuracy at 500 milliampères. It is the invention, I believe, of Mr. Cunynghame,[2] and its description is as follows:—The two ends of a copper solenoid dip into two mercury cups, and on the current reaching the predetermined amount the solenoid is "sucked over" by (i.e., drawn back upon) a fixed iron core. The solenoid is pivoted at the bottom, so that, as soon as it deviates a little from the centre, it drops by the force of gravity carrying its ends out of the mercury, and so breaking circuit. A magnetic "cut-out" of this description seems to me to have certain advantages over a fuse, the chief of which is that the exact breaking point can always be ascertained without destroying it. This instrument seems all that could be desired as a circuit breaker. Of course, as already mentioned, it is in the highest degree improbable that it would often be called upon to act. Still the possibility should not exist that a current strong enough to call it into action might pass through the body. To make this impossible the electro-therapeutic circuit ought to be a shunt circuit—i.e., only receiving a certain proportion of the possible maximum—a proportion that can be adjusted according to requirements in a way somewhat similar to that by which we shunt a galvanometer to read 5, 50, or 500 milliampères. Resistances up to, say, 100,000 ohms should be available for this shunt. Suppose the predetermined amount of current that the "cut-out" will allow to pass to be 500 milliampères, in a one-fifth shunt the possible maximum would be 100 milliampères, capable of reduction by the adjustable resistances to any required minimum, which could not be exceeded even were the "cut-out" protected circuit breaking at 500 milliampères. But a break of even the smallest current may be prevented by means of an arrangement that will, instead of *breaking* the main circuit, *shunt* the greater portion of it. Thus, then, we are safeguarded. Our first line of defence is an effective "cut-out" to break the current at a predetermined amount, or to shunt any sudden influx. Our second defence consists in the fact that we are working on a by-circuit, and not on one that allows a current of 500 milliampères through all resistances to pass before it breaks. Our third line of defence lies in the adjustable resistances whereby we can bring down the shunt-reduced maximum to any desired figure, however small. These resistances are absolutely reliable, and afford, in fact, a smoother, safer, and more satisfactory method of regulating current strength than even the cell collector, upon which, in this country at least, many of us are accustomed so implicitly to rely.

Brighton.

[1] THE LANCET, Dec. 19th, 1891.

[2] Manufactured by Woodhouse, Rawson, United, Limited.

RABIES.—An outbreak of rabies has required the destruction of a pack of hounds belonging to the Armagh Hunt Club.

RECTAL ANTISEPTIC INJECTIONS IN EPIDEMIC INFLUENZA AND IN ADVANCED PHTHISIS WITH LARGE CAVITIES.

BY J. C. VOIGT, M.D. EDIN.,
FORMERLY RESIDENT MEDICAL OFFICER, BURY AND SOUTHPORT INFIRMARIES.

ON Dec. 23rd, 1891, I was called to a case of advanced phthisis. I found the patient prostrate, with a temperature of 103° F. She had been absolutely confined to bed for twenty-three days. There were profuse night perspirations and tubercular diarrhœa—fifteen loose stools in the previous twenty-four hours. There were the characteristic hectic flush and club-shaped nails. The patient had had no sound, refreshing sleep for more than a week. The cough was incessant. The profuse yellow expectoration showed abundant tubercle bacilli when examined by the Ziehl-Neelsen method of staining. The physical signs indicated a large cavity at the right apex and consolidation over the upper half of the left lung. After first trying to reduce the temperature by hydrochlorate of quinine in combination with antipyrin, and to check the diarrhœa by dilute sulphuric acid with small doses of tincture of opium, I, finding that the patient was losing strength, began on the night of Dec. 24th to give rectal injections of half a drachm of the oil of eucalyptus globulus in a tablespoonful of warm olive oil. Five of these injections were afterwards given every day till the evening of Jan. 2nd, 1892. By that time three ounces of eucalyptus oil had been injected. The patient was then able to sit up and walk about in her room. Her temperature was normal, and had been so since Dec. 27th. The diarrhœa had ceased altogether on the 25th (the second day of the treatment by injections). The night sweats had persisted till Dec. 31st, when they also ceased. The patient now had sound refreshing sleep every night, and ate heartily every day. With the results in this case before me, I was led to try the germicidal action of eucalptus by rectal injections in cases of influenza in the present epidemic. The following are brief notes of four recent cases only, in which these antiseptic injections constituted all the treatment as far as drugs are concerned. They are taken at random from my note-book, and are fairly typical of over fifty other cases treated similarly during the past month.

CASE 1.—T. L——, a girl aged six. Influenza. Patient first seen in the afternoon on Jan. 22nd. Temperature 103°. There was much pain in the frontal region and in the limbs and back. A rectal injection of half a drachm of pure oil of eucalyptus globulus in an ounce of warm olive oil was given at 3 o'clock. This was repeated three hours afterwards. Half an hour after the first injection she fell asleep, and when she awoke asked for milk, and drank some. That evening the temperature was 102°. The injections were continued every three hours. The next morning the temperature was 100°.—Jan. 24th: Three more injections; all pain gone; evening temperature normal.—25th: The temperature remains normal; injections discontinued; child eats well and plays; is quite cheerful; no further treatment necessary.

CASE 2.—Mrs. H——, aged forty-five. First symptoms commenced on Jan. 22nd early in the morning. First seen in evening (8 o'clock); temperature then 102°. Great pain in frontal region and in back. At 8.30 P.M. one drachm of eucalyptus oil with an ounce of warm olive oil was injected into the bowel. This was repeated at 10.30 P.M.—23rd: Morning temperature 101°; pain continues; injection every two hours (dose as before). At night much less pain in head; pain in back almost gone; temperature 99·8°—24th, morning: All pain gone; temperature normal. During the day three more injections. At night temperature normal. Patient got up on the following day.

CASE 3.—Mr. J——, aged fifty-two. Severe influenza began on Jan. 21st, with very acute pains; temperature 103°. Rectal injections of eucalyptus every two hours during the day.—22nd: Three more injections; all pain gone; temperature normal in the evening.—23rd: Patient gets up; eats well.—24th: Goes out of doors. Although weather damp and cold, has no relapse.

CASE 4.—Mrs. W——, aged forty. Seen on Jan. 21st. Temperature 102·6°. Three rectal injections (one every two hours).—22nd: Four more injections in the evening. All pain gone; temperature 99°.—23rd: Found her downstairs. Temperature normal; eats heartily.

Remarks.—The antiseptic action of rectal injections of eucalyptus oil is efficacious in cutting short an attack of influenza, and in preventing altogether that nervous prostration and general break down which accompany and follow the disease, provided always that one is called to the case at a sufficiently early stage of the illness, and that there is no contraindication in the state of the heart or kidneys. For adults, without coexisting heart or kidney disease, a drachm of the pure oil of eucalyptus globulus is mixed with nearly an ounce of warm olive oil. An india-rubber ball syringe is filled with this mixture for each injection. The injections are at first given every two hours. When improvement sets in the dose is reduced to half a drachm of the eucalyptus, and the injections are given less frequently.

Southport.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

CHRONIC INTERSTITIAL MASTITIS (TUBERCULAR) WITH CARCINOMA.

BY W. S. CRAWFORD, B.A. CANTAB.,
ASSISTANT SURGEON, LIVERPOOL CANCER AND SKIN HOSPITAL.

THE following case came under my care at the Liverpool Cancer and Skin Hospital, and appears interesting on account of the association of tubercle and carcinoma.

C. S——, aged forty-one years, sixteen years married. She has had six children (nursed by herself) and six miscarriages during this period. In her first lactation she had acute inflammation of both breasts, which subsided without the formation of abscess. Two years and a half ago she noticed some lumps in her right armpit, which were perfectly painless and remained quiescent for some time. Six months later she was confined; she suckled the child for twelve months by both breasts; very little milk was secreted by the right one. At the end of this period of nursing she noticed a hard lump in the outer part of the right breast; the swelling in the axilla had been increasing in size and was painless. Her mother died of consumption; there was no family history of cancer. On examination, in the beginning of November, 1891, the woman was very thin, pale, and miserable-looking. She stated that she had lost much flesh recently. The right breast was thin and atrophied, more so than the left; at the upper and outer border a small lump could be seen, about the size of a filbert; the skin over this area was puckered, presenting the well-known "pig-skin" appearance. This swelling was found to be intimately incorporated with breast tissue, somewhat irregular in outline, and firmly attached to the skin; the remainder of the breast was tough to the feel, adherent to the deeper structures, and riddled throughout with small shot-like bodies. Two lymphatic glands under the free margin of the pectoralis major were found enlarged and very hard. Filling up the top of the axilla was a fluctuating painless swelling, mixed up with an indefinite hard mass. Operation: Removal of breast and glands. Some difficulty was experienced in removing the breast from the underlying structures on account of the intimate adhesion and thickness of the fibrous tissue. On making an incision into the axilla about two ounces of thick curdy pus escaped, and a mass of caseating glands was removed. The wound was healed in a fortnight. On Jan 30th, 1892, the woman presented herself for examination. She had put on flesh, and had lost her wobegone expression. The operation incisions were sound, and there was no recurrence. Examination of parts removed: The breast consisted of tough fibrous tissue, interspersed throughout with small cysts; the majority of these when opened contained caseous material, some few containing puriform fluid. The lump at the outer corner of the breast cut like typical scirrhus; the two isolated lymphatic glands were very hard and grated on section. The axillary mass consisted of the partial outlines of six or eight glands caseating throughout.

The tumour was microscopically examined by my friend,

Mr. Thelwall Thomas, and the sections exhibited at the Liverpool Medical Institution, on Jan. 28th of the present year. The following is his report:—The breast shows a large amount of interstitial fibrous tissue, some of it in process of formation, distended gland spaces containing a central mass of caseous material without definite structure, surrounded by a few irregular rows of apparently proliferating acinous cells, the majority irregularly cubical in shape, others appearing more or less flattened. This description applies to every gland space examined with the exception of a few, in which only a small number of the cells remained, along with small fragments of the caseous material. The nodule at the outer corner is typical scirrhus, as well-marked a specimen as can be met with no cysts in this mass. The lymphatic glands on the way to the axilla contain numerous well-marked giant cells with nuclei at their periphery, placed in the centre of an irregular mass of small round cells, evidently nodules of tubercle, immediately adjoining which are found a well-marked alveolar stroma, containing small cubical cells of secondary carcinoma (from the breast). The caseous glands in the apex of the axilla are tubercular; many giant cells are found, and in a few sections are distinctly seen cells somewhat cutical in outline, with an indefinite alveolar stroma—most probably early nodules of secondary carcinoma.

Remarks.—In a large number of specimens from several cases of simple chronic interstitial mastitis (some of which had a carcinomatous nodule in them) we have been unable to find any marked caseating changes in the gland acini, which leads us to look on this one as probably tubercular, notwithstanding the absence of giant cells and bacilli of tubercle, which have been carefully sought for. The lymphatic glands have certainly tubercle and carcinoma intermixed.

Liverpool.

CASE OF CHOREA TREATED BY CHLORAL HYDRATE.

BY B. BASKETT, M.R.C.S., L.R.C.P.

THE following is a case which recently occurred in the Bristol General Hospital, where I was physicians' assistant at that time, and which, as it may be of interest, I am allowed to publish by the kind permission of Dr. J. Mitchell Clarke.

A. Y——, a strong, well-nourished girl of fourteen years of age, engaged as a pupil teacher in a national school, was admitted on Aug. 24th for rheumatism accompanied with chorea. It was her first attack, was mainly right sided, and presented no unusual feature; it was attributed to excessive mental work. She improved with rest and treatment—viz., first salicylate of soda, and subsequently Fowler's solution—up till Sept. 3rd, when, under the agitation caused by the conduct of a patient in a neighbouring bed, she fell into a state of furious excitement. Her movements became incessant and maniacal in character, so violent that she was constantly being thrown out of bed, and had to be tied down with boards let in at the sides. She seemed conscious all the while, and to understand what was said; she obviously, for instance, tried to answer questions, but could not frame the words. She was at once isolated, and at night chloral, at first combined with bromide of potassium, was given in fifteen doses of each, the arsenic being continued during the day. On the night of Sept. 4th I gave her thirty grains of each without producing any sleep, and increased it to forty on the night of the 5th with equally little effect. On Sept. 6th, as she was becoming completely worn out, and had had no sleep since Sept. 3rd, while it was obvious that if the movements were not in some way checked she must, sooner or later, die, I administered chloroform. She was kept under for several hours, but when she came round was as bad as ever. It was then determined to make a systematic attempt to chloralise her, and for the next four days doses were administered at frequent intervals according to the results produced. It was given not so much with the intention of producing sleep as with that of checking the movements. She was, of course, under careful observation, special attention being paid to the temperature and the state of the pulse. The quantity given at each dose, and the intervals between the doses, were left to the judgment of the resident officer in charge at any given time; for instance, she was never roused from sleep except to be fed, and if one dose was ineffectual, another was given within the hour. Acting on this method, within a few hours from the time that chloralisation was begun on the night of Sept. 6th, she was got under the influence of the drug and kept more or less so for the next four days, the quantity required to produce the effect being altogether about a hundred grains daily. She was fed by the mouth when possible, but enemata of milk, eggs, and brandy were frequently administered also. During the height of the attack her temperature rose to about 103°, and kept at that level with slight fluctuations. This was probably due to the waking up of the rheumatism she had suffered from in the beginning, because she exhibited signs of pain and tenderness in the ankles, though there was no swelling there, and because at this time, and not till then, a very loud systolic murmur was to be heard at the apex, which could be heard up to the date of her discharge. It is worthy of remark that the chloral had no perceptible effect on the temperature. By Sept. 11th the violent movements had entirely disappeared, and she would sleep for hours after the administration of one dose of ten grains. She had gained ground so far that the choreic movements were decidedly less marked than they were just before this acute exacerbation. The probability, indeed, is that if the chloral had been farther pushed a few days more she would have been entirely cured of chorea. But, reduced as she was, in the absence of urgent symptoms, and bearing in mind the cardiac mischief, it was considered better to reduce the quantity of the drug and substitute tonic treatment as soon as possible. From the result of this case it seems probable that we could—at the expenditure, it is true, of considerable trouble—reduce very materially the length of time spent in the cure (or watching rather, for it is surely doubtful whether the patient recovers any the sooner for the exhibition of the drugs ordinarily used) of cases of chorea. Unfortunately I have had only once the chance of seeing it used in any other case—viz, that of a man of twenty-four. It was a rather severe case, but the chloral was not pushed. However, with fifteen-grain doses every four hours, he was certainly and considerably benefited, but he insisted on leaving hospital in a few days' time before any marked result could reasonably be expected.

Cotham, Bristol.

CASE OF PUERPERAL ECLAMPSIA; RECOVERY.

BY WILLIAM ROBERTS, M.R.C.S. & L.R.C.P.LOND.,
AND
CHESMAN BARKER, M.R.C.S. & L.R.C.P.

THE following case may be worthy of record in THE LANCET:—

Mrs. H——, aged twenty-two, is a primipara, and had arrived at the thirty-eighth week of her pregnancy without any untoward symptom, when on the afternoon of March 14th, 1892, she was seized with nausea and vomiting, and at 7 P.M. with an epileptiform convulsion, which, although bilateral, was stronger and more violent on the right side; she then rapidly became unconscious. There was then slight œdema of the legs and feet and puffiness of the face, and the urine was scanty and turbid, and contained about half of albumen. The skin was dry and harsh, the temperature 101°, and the radial pulse 120, and the arterial tension decidedly raised. The breathing was frequent and stertorous. Chloral (20 grs.) and bromide of potassium (30 grs.) were prescribed every four hours, but seven more fits occurred at intervals of half an hour, the patient still remaining comatose. Feeling certain that unless something were done the patient would speedily die, we decided to empty the uterus, and at 9 P.M. passed a gum-elastic catheter between the membranes and the uterine wall for a length of six inches. We also administered two minims of croton oil, which soon produced several copious evacuations. At 3 A.M. on the 15th the patient began to show signs of irritation, so chloroform was administered, and at 4 A.M., the os being completely dilated, the catheter was removed, the membranes were ruptured, and the woman was delivered by the aid of the forceps of a living female child in about ten minutes from rupturing the membranes. The placenta came away without trouble, and there was but little hæmorrhage. The administration of chloroform was then discontinued, and the patient left, as she appeared to be no worse. At 12 A.M. we found her still comatose, and

were told that she had had four more convulsions. The skin being still very dry, and very little urine having been passed, and that into the bed, we gave her a hypodermic injection of a quarter of a grain of pilocarpine at 1.45 P.M. At 7 P.M. she was still unconscious, but was perspiring profusely, and had also retained some milk and soda-water, all previous attempts at feeding having been unsuccessful. On the morning of the 16th, forty-eight hours after the commencement of the coma, she became conscious, and then complained of severe headache and complete amaurosis. She was then put on twenty-grain doses of citrate of potash every four hours. In the course of the day she passed urine, which on examination contained one-sixth of albumen, which has since almost disappeared. She then made an uninterrupted recovery, regaining her sight in twenty-four hours, and at the present is up and attending to her household duties, and is suckling the infant, which is also quite well.

The interest attaching to the case lies in the success which attended the treatment, as regards both the child and the mother. Knowing, as everyone does, the almost uninterrupted fatality of cases occurring before labour, it is with the greatest pleasure that we put on record a case in which not only the mother completely recovered, but the child also survived. We wish to add our testimony to the advisability of immediate operative treatment in all cases occurring late in pregnancy, the nature of the procedure of course depending on the severity of the case. Inasmuch as in our case the convulsions themselves were not very frequent, we decided to bring on labour gradually; but, in a case in which the convulsions threatened to terminate life by their frequency and severity, we should not hesitate to empty the uterus by dilatation with Hegar's dilators.

Cambridge-gardens, W.

A CASE OF ENTERIC FEVER,

IN WHICH SYMPTOMS OF PYÆMIA APPEARED ON THE THIRTIETH AND DEATH OCCURRED ON THE THIRTY-SEVENTH DAY OF ILLNESS.

BY IAIN CLERK, M.B.,

PHYSICIAN-SUPERINTENDENT TO THE JOINT BURGHS FEVER HOSPITAL, KNIGHTSWOOD, GLASGOW.

THE formation of small abscesses in certain parts of the body is not unusual in enteric fever, especially if the case has been a long-drawn-out one, or when rapid emaciation has taken place. With regard to abscesses, Murchison has the following note: "I have met with many instances in which, during convalescence, abscesses have formed beneath the skin in different parts of the body. ..... In rarer instances pus is deposited in the joints or in some of the internal organs, and then the case usually terminates fatally." The following short account of a case in which symptoms of pyæmia appeared on the thirtieth and death occurred on the thirty-seventh day of illness is, I think, worthy of record, seeing such a complication is somewhat unusual in this disease.

J. K——, aged twenty-eight, labourer, was admitted to the Joint Burghs Hospital on Sept. 30th, 1891, certified as suffering from enteric fever. His illness began eight days before admission, with headache, shivering, vomiting, general weakness, &c. It is not necessary to follow the history of the case, as there was nothing special to note, with the exception, perhaps, that the crop of rose papules was very profuse over the abdomen and chest. The highest temperature recorded was 103·8° F. There was no looseness of the bowels, although from colour and odour the stools were characteristic enough. The temperature, which all through his illness was very steady, became variable after the twenty-sixth,[1] dropping on the twenty-ninth to 98° in the morning, but rising in the evening to 103°. Thirtieth day: Morning temperature 103°, evening 101·8°. Thirty-first: Morning temperature 102°, evening 104°; and after this it ranged between 102° and 104°, or sometimes slightly over.

On the thirtieth day of illness the right cheek was seen to bulge a little, and on the following day the right eye was completely closed, the upper and lower eyelids being largely swollen. On the thirty-third day the left eye became involved, both lids swollen enormously, and the eye closed. On the thirty-fifth day a large swelling, not glandular, appeared in both sides of the neck at the angles of the jaws, and by this time the outer half of the right upper eyelid sloughed away, and there was considerable bogginess in the right temporal fossa and over the right ear. In all of those places named collections of pus took place with alarming rapidity; and although openings and counter-openings were made freely and early, sloughings of portions of both upper eyelids took place, and the patient gradually sank, and died on the thirty-seventh day of illness. As the temperature did not drop at the end of three weeks, it is likely that inflammatory action was still going on in the lower part of the small bowel; and it is conceivable that some purulent matter from an ulcerating patch may have got into the circulation, and, possibly carrying the enteric poison with it, given rise to those abscesses of which I have spoken. From the absence of glandular enlargement, it seems to have passed by the blood circulatory rather than the lymphatic system.

Glasgow.

[1] I mean *day of illness*, not day of the month, so much in vogue, but practically valueless.

A CASE OF HYOSCINE POISONING TREATED BY PILOCARPINE.

BY HERBERT L. EVANS, M.B., C.M. EDIN.

IN connexion with the case of poisoning by hyoscine and that of poisoning by pilocarpine mentioned on pages 328 and 329 respectively of THE LANCET of Feb. 6th, 1892, the following may be of interest:—

On Oct. 16th, 1890, I was called to J. B——, a case of delirium tremens, at 4.45 A.M. He had just had a fit. This, in his case, was no unusual occurrence, his first attack having begun on Sept. 20th of the same year with an epileptiform seizure. Chloral, bromides, and morphia had previously failed to produce sleep, so a two-minim injection of a 1 per cent. solution of hyoscine was given, but this also failed. Eight hours later he had nearly three minims by the mouth, with no better result. In the evening morphia and chloral were given without effect. Later on, as he could not be kept in bed and was quite unmanageable, a three-minim injection of hyoscine of presumably the same strength, but from a different bottle, was given. The patient rapidly became comatose with dilated pupils and arteries, rapid pulse, congested face, hot, dry skin, and rapid and deep breathing. Morphia was injected, but without any apparent improvement. Directing that the patient should be energetically stimulated by pinching, I hurried to the surgery, and on returning with pilocarpine found that, as before, the patient could not be roused. Unfortunately no record of the injections of this was kept. So urgent seemed the necessity of producing symptoms approaching those characteristic of the drug that injections were made in the thighs and arms at intervals of about five minutes. In a short time there was a faint reaction of the pupils to light, with a tendency to moistness of skin, whilst the breathing and pulse improved; and on my next holding the candle to the face I was gratified by seeing the patient knock it from my hand, after which rapid improvement took place, followed by complete recovery. Great soreness and itching were complained of next day, the latter relieved by alkaline washes and cocaine ointment. His thighs and arms showed marks of about eight punctures, and he had probably had about two grains of nitrate of pilocarpine. His general health improved under strychnine, red extract of cinchona, &c., so that in a short time he was able to indulge in shooting and billiards, and seemed to have no craving for liquor.

Goring-on-Thames.

HOSPITAL FOR SICK CHILDREN AND WOMEN, BRISTOL.—The year 1891 completed the twenty-fifth year of this institution, and the annual report just issued records some interesting details on the history and career of the charity covering that period. In 1866 the hospital opened with six cots. The beds now number 100. The medical statistics of the past year show that more patients were treated both in the hospital and as out-door patients than in any former twelve months. The average annual expenditure is estimated now at £3300. The year's income from all sources (except legacies) fell short of the expenditure by £151 6s. 10*d*. The deficit had, however, been discharged out of a legacy received of £2964 14*s*. 7*d*.; the current year consequently began freed of an adverse balance.

A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

ROYAL FREE HOSPITAL.

CASE OF IMPACTION OF THE GILL-PLATE OF A HERRING IN THE LARYNX OF AN INFANT; TRACHEOTOMY; REMOVAL OF BONE; DIFFICULTY IN REMOVAL OF TUBE FROM FUNCTIONAL PARALYSIS OF ABDUCTORS; COMPLETE RECOVERY.

(Under the care of Dr. SAMUEL WEST.)

THIS case is interesting in two particulars: first, on account of the period of latency; and, secondly, because of the difficulty in the subsequent removal of the tube. The impaction of the bone in the larynx was marked by an initial attack of dyspnœa of great severity. The dyspnœa quickly subsided, and for four days continued so slight that no serious importance was attached to it. At the end of that time, however, it returned, and rapidly became urgent. The explanation is clear. The initial attack was due to the spasm set up, and the subsequent dyspnœa to the consecutive inflammation. The first was transitory and the second permanent. The difficulty in removing the tube was without doubt due to the closure of the glottis as the result of paralysis of the abductors, for the child could cry audibly though it could not inspire. The abductor paralysis was, Dr. West thought, the result of disuse, of laziness if we like to call it so, of the abductor muscles, and it was not until they had been roused to action again by the means used to dilate the glottis that they began to functionate.

Kate C——, a healthy infant aged nine months, was brought into the hospital suffering from considerable dyspnœa, with stridor and great recession of the chest walls. The movements of the larynx on respiration were greatly exaggerated. The face was pale and the child drowsy. The diagnosis was made of obstruction to the main air tube, in all probability in the larynx, and the history favoured the view that it was due to a laryngitis excited by a foreign body. The condition of the child was so serious that tracheotomy was performed at once, with immediate relief to the symptoms, after which the child went to sleep and slept comfortably the whole night. The mother stated that the child was perfectly well until the middle of the day on July 30th, 1889. It was then quite suddenly seized with urgent dyspnœa, and was thought to have swallowed a plum-stone. After a little while the urgency of the dyspnœa passed off, and, though the breathing continued short during the rest of that day and the next day, it was not bad enough to call in a doctor, and on the afternoon of the 31st the child was brought to the out-patient room, but, in spite of the history, was not thought to be a case for admission. The next day it was still better, and played about cheerfully all day; but at 10 o'clock in the evening the dyspnœa returned, and rapidly became worse, so that early on the morning of Aug. 2nd the child was brought to the hospital and admitted. When Dr. West saw it in the afternoon he advised instant tracheotomy. On the evening of the 2nd after the operation the temperature rose to 101·2°, and the next morning to 101·4°, and then fell gradually to below normal on the 5th, rising, however, the next day to 100·4°, but from this time it remained, with one or two exceptions, due to accidental causes, steadily below normal. The child progressed favourably till the morning of the 6th, when a severe attack of dyspnœa set in again suddenly. This lasted but a short time, and did not recur until midday, but lasted until Dr. West saw it about 3 o'clock. There was then considerable recession, and the child was cyanosed. The tube was removed, and after a violent fit of coughing a piece of the antiseptic gauze with which the wound had been dressed was coughed up. The dyspnœa still continuing, though not so severely, the air tubes were examined with a fine probe as far as could be done; and feeling something hard in the larynx above the wound, Dr. West introduced a pair of forceps, and removed a fishbone. The trachea was next examined and a curved wire passed down it in case there might be any more of the gauze within reach, but none was detected. The removal of the bone did not at once greatly relieve the dyspnœa, but by the next morning the breathing was comparatively easy. In the evening of the 7th the tube was removed, and remained out for about an hour, but the respiration was carried on entirely through the wound. The tube was now left out every day for a short time, and frequently when the tube was out the child cried vigorously. Still it was evident that the air did not pass through the larynx, for after an hour or so, as soon as the granulations round the wound had had time to swell up and close the orifice, dyspnœa set in and the tube had to be replaced. On Aug. 19th it was found that the child was able to breathe for a little time through the larynx, but after this day it became more and more difficult to keep the tube out on account of the dyspnœa produced. On Sept. 5th the child was anæsthetised and a fresh examination made by Mr. Stabb. The tube was removed, and a graduated bougie (No. 11) was passed up through the larynx between the cords. It was then also passed from the mouth downwards through the larynx. The wound was then closed, but dyspnœa immediately returned. A dilator was then taken and passed between the cords, and the blades slightly separated. For a few seconds after this the patient was able to breathe through the mouth when the wound was closed, but dyspnœa again returned, and a silver tube was inserted in the wound. Nothing was felt which could explain the dyspnœa. On the 7th, when the tube was taken out, the breathing through the mouth was perfectly natural and continued so henceforth, so that the tube was not again inserted. The child continued well, and was discharged with the wound completely healed on the 18th. The bone which was removed was one of the gill-plates of a small fish, probably a herring.

MANCHESTER ROYAL INFIRMARY

MYXŒDEMA TREATED BY THYROID GRAFTING.

(Under the care of Dr. THOMAS HARRIS and Mr. G. A. WRIGHT.)

IT is very advisable that this method of treating what has hitherto been an incurable disease should receive the fullest investigation, and cases in which it has been tried be reported. The grafts have been taken from other patients who were suffering from parenchymatous enlargement of the thyroid gland, which was producing symptoms for which it was considered advisable to remove part of the gland, also from sheep and from monkeys. Evidence of the good produced by this grafting when the grafts have retained their vitality and become vascularised is accumulating; but it is necessary to watch the patient for some time before satisfactory conclusions can be come to with regard to the benefit derived by any particular case. We have not space to consider the history of this method of treating myxœdema and allied conditions; the experiments and observations of Schiff, von Eisselsberg, Carle, and others are, however, not only interesting in themselves, but important in that they show the good effect on some of the lower animals, whilst the investigations of other observers prove that the good result of the grafting may be long continued if not permanent.

Mrs. T——, aged forty-eight, was admitted to the Royal Infirmary on March 6th, 1891. There was no family history of goitre or of myxœdema. The patient was a resident in Manchester, though she had travelled a good deal about the country. She was the mother of five children, three of whom are alive and well, two others died from convulsions during teething, and she had had two miscarriages. She gave the following history of her illness. She has been ailing more or less for nine years, when she suffered from a bad attack of bronchitis, and at this time she noticed that her neck was enlarged. The swelling was painted with iodine, but for a time increased until her neck became nearly twice as large as at the time of her admission; it attained its greatest size about eight years ago. She herself attributed the swelling to her persistent cough. The fulness of the neck then began gradually to subside, and she noticed that the ankles and abdomen occasionally swelled; frequency of micturition at night was also a new symptom. About two years and a half ago a still more severe attack of bronchitis came on, and the swelling of the feet and abdomen increased, and finally spread to her face. At this time the neck was nearly natural in size. It is within

the last two years and a half that the features of the present disease have developed, the most striking symptoms being a slowness of speech, swelling of the face, and weakness, together with a feeling of "strangeness" in the head, and a sensation of the mouth being smaller than natural. Such was the account obtained by the dresser on her admission. Mr. Deakin, surgical registrar, gives the following description of her condition at that time: "She is a fairly well nourished woman of forty-eight. The skin is dry and thick, but (with the exceptions to be presently mentioned) not hard or scurfy; it is in most cases of a yellowish earthy colour, but over the nose and to a certain extent over the cheeks it is dull reddish. The alæ of the nose and the lips are red, smooth, and full, and no wrinkles are to be seen in any part of them. The eyebrows are very much elevated and perfectly uniformly so, and the forehead is marked with three or four lines, horizontal in the centre, and curving over towards the sides. These lines help much to give her the peculiar staring look she possesses. The conjunctivæ are œdematous and glistening. The hair is fairly thick and strong. The mouth, gums, and palate are all rather œdematous. The tongue is markedly enlarged, somewhat pale, and its borders are indented. The eyelids are very markedly swollen and are pale and translucent, especially the lower, which show a distinct, soft, smooth pouch; the whole appearance resembles very closely that seen in chronic Bright's disease. The neck is flabby and soft, and examination of it gives the idea that some tough, hard, shrunken remains of the thyroid can be felt. The skin of the hands is dry, hard, thin, and scaly; the fingers are pointed; the nails are normal, but are overlapped by the skin, so that no groove can be made out. The hands are not unusually large. The abdomen is prominent around the umbilicus; there is no ascites; there is no œdema of the legs; the left limb is longer than the right; there is tenderness of both calves on pressure; the skin of the feet is horny and dry, and the toes are flattened together. The patient is fairly intelligent. Her sight has slowly been failing; her hearing is good; taste perhaps less distinct than it used to be. Pupils normal. Plantar, epigastric, and abdominal reflexes not obtainable; knee-jerk and deep reflexes over radius and olecranon are diminished. Sensation generally seems delayed; her speech is very markedly modified; and mastication and swallowing are slow. Pulse 60; heart normal. Appetite good; bowels regular. Respiration 17, a few râles occasionally. Urine 1010, acid, no sugar, contains a trace of albumen. The red blood-corpuscles were estimated at 5,970,000 per centimetre. No excess of white corpuscles. Hæmoglobin nearly normal in amount."

The patient was kept in hospital, and chiefly in bed, for a month before operation. During that time her general condition improved considerably, and the swelling of the face was less marked; the speech and other conditions remained little altered. On April 4th a curved incision was made below each breast, and the glands were raised a little from the pectoral muscles. Half the thyroid gland of a small, young, green monkey, which was chloroformed to death in the ante-room of the theatre, was then placed under each breast. The wounds were closed and dressed. The operation wounds healed by primary union and without any disturbance, and the patient expressed herself as feeling better. On the 29th she was sent to the convalescent hospital, and her condition then was decidedly better than on admission. The improvement was maintained, and she was sent home after being in the country for some weeks. She relapsed very much into her former state under the less favourable surroundings of her home, and was readmitted to the infirmary very much as she was at first. She again immediately improved, but it is clear that the improvement is due far more to the wholesome circumstances of her hospital life than to any special treatment. Her speech is quite unaltered. She herself, however, is strongly of opinion that she is much improved.

Remarks by Dr. HARRIS and Mr. WRIGHT.—There is, we think, no doubt that this case is clearly one of myxœdema. The history of the affection of the thyroid causing first enlargement and subsequently complete or almost complete atrophy is interesting. The monkey's thyroid was exceedingly small, and though it set up no irritation in its new position, we were quite unable to say whether it remained as it was, was absorbed, or grew. At any rate, we could feel no trace of it afterwards. We fear the temporary improvement must be put down entirely to better hygienic conditions, and so far as the thyroid grafting goes, no conclusion can be drawn from this case.

ROTUNDA LYING-IN HOSPITAL, DUBLIN.

MATERNITY CASES.

(Under the care of Dr. JOHN H. GLENN, Assistant Master.

THE accounts of these cases will be read with interest, as they give descriptions of unusual conditions. The complication of parturition referred to in the first case is luckily a very unusual one, and is not infrequently fatal. Two cases which somewhat resemble it have been recently described: one by Hirschfeld, in which the rupture extended through the cervical part of the uterus, and in which treatment similar to that followed by Dr. Glenn proved successful; another by Dr. Taylor, in which the rent extended through the posterior vaginal wall and was of large size, and which ended fatally in spite of antiseptic precautions. The necropsy does not afford any reason for regarding the hyperpyrexia as due to septic absorption.

CASE 1. *Accidental hæmorrhage; rupture through posterior vaginal vault; recovery.*—M. B——, aged twenty-five, multipara, was admitted to the Rotunda Hospital in labour on the evening of Nov. 18th, 1891. Dr. Glenn was called to the case just after midnight on account of some slight antepartum hæmorrhage. On palpation the child was made out lying in the first vertex position, the uterus was very tense, the lower segment greatly thinned, and the contraction being strongly marked. No fœtal heart could be heard. The bladder was empty. The tenseness of the abdominal walls, the almost constant pain and the general condition all pointed to accidental hæmorrhage. On examination per vaginam the diagnosis was verified by a gush of blood following the pushing up of the head. Having disinfected the external parts, and douched the vagina with carbolic solution (1 in 40), internal version was performed, a foot brought down, and the case left to nature. Half an hour later, the hæmorrhage recurring, traction was made on the foot, and the delivery gradually completed. After the expulsion of the child, hæmorrhage continuing, and the patient looking very collapsed, an ineffectual attempt was made to express the placenta, which, however, was found to have left the uterus. It was removed from the vagina by hand, and at the same time a laceration of the cervix, extending backwards through the posterior vaginal vault, was made out, the arm passing upwards through the rent into the abdominal cavity as far as the elbow. A long strip of iodoform gauze was introduced through the rent, the lower end left in the vagina, a compress and binder applied, and restorative treatment employed. During the afternoon the patient was given a quarter of a grain of morphia hypodermically. The catheter was passed regularly. On the 23rd the plug was removed; no hæmorrhage followed. On the 27th the patient was deeply jaundiced. Her urine was examined for urobilin, but with a negative result. The yellow tinge gradually disappeared, and she made an uninterrupted recovery, the highest temperature being 99·8°. The patient was discharged from hospital on Dec. 18th, 1891.

CASE 2. *Puerperal mania; hyperpyrexia; death.*—M. D——, aged twenty, unmarried, primipara, was admitted on Nov. 18th, 1891. Her state of health on admission was good, but she was suffering from considerable mental depression. On Nov. 20th, at midnight, the patient was delivered by forceps, as the temperature had risen to 101·2°. The os was almost fully dilated. No special difficulty was experienced, but the perineum was lacerated, requiring three stitches. The child was born alive. The following day the patient was very unruly, and got out of bed and took her binder off. Her evening temperature on the 23rd was 100·6°; the lochia normal. Nothing of special interest occurred till the 26th, when she was very restless, her face flushed, and with an expression of suspicion. Stitches were removed; the union was perfect. Her evening temperature was 98·6°. On the 27th she developed well-marked mania. Hyoscine ($\frac{1}{75}$ gr.) was given. Evening temperature 102°; pulse 103. Slept badly. The following day the patient was very violent. Bromide of potassium (30 gr.) was administered. Her skin was harsh and dry; wet pack given. Morning temperature 102°, evening 102·4°. On the 29th, at 6 A.M., she had a rigor, and half an hour later her temperature in the axilla was 109·4°. The temperature was verified by three certificated thermometers. Death took place at 7 A.M. Post-mortem examination by Dr. Earl revealed no cause for death; there was no meningitis, and the thoracic and abdominal organs were healthy.

Medical Societies.

PATHOLOGICAL SOCIETY OF LONDON.

Congenital Dislocations of Radius.—Congenital Malformations of Kittens.—Anencephalous Monster.—Ileo-colic Intussusception from Inverted Meckel's Diverticulum.—Acute Double Tubercular Disease of Testes.—Unusual Distribution of Secondary Cancer.—Aneurysm of Aorta in a Child.—Cystic Adenoma of Kidney.

AN ordinary meeting of this Society was held on April 5th, the President, Sir George Humphry, in the chair.

Mr. F. C. ABBOTT read a paper on nine cases of Congenital Dislocation of Radius, seven of which occurred in one family, the cases having been scattered over four generations. Five of the cases, belonging to three generations, had been examined personally by him, and all presented dislocation of radius forwards in one or both arms. Flexion and extension in all were free, but there was no movement of pronation or supination. In all the cases the deformity had caused the patient a good deal of inconvenience; but no member of the family was the subject of any other deformity. Dissections of the elbows of the youngest of these cases were shown, the chief abnormality being a large protuberance from the outer side of the coronoid process, fixed to the neck of the radius, and possessing an extra centre of ossification. The dissected elbows of a child aged two months were also shown. On the right side there was dislocation of both bones directly backwards, the articular end of the humerus being deeply cleft and much altered in shape. On the left side the radius was dislocated backwards, upwards, and inwards, still keeping its normal relation to the ulna, which articulated with a mass of cartilage attached to the lower part of the shaft of the humerus, representing the trochlea and internal condyle, the lower end of the humerus consisting only of external condyle and capitellum. In this case, the prime cause was evidently in the humerus. A living specimen of congenital dislocation of left radius backwards and outwards in a girl aged twenty-one was also shown.—The PRESIDENT said that in all cases the displacement was slight, and all seemed to be due to want of proper condition of the orbicular ligament. There was a similar case in the Cambridge Museum, in which both humerus and radius were deformed, the neck of the latter being longer than it should be, causing difficulty in flexing the forearm.

Mr. J. JACKSON CLARKE showed a Litter of Five Kittens with various congenital malformations. Their dam had a large abdominal tumour. They were all undersized, all had double hare-lip and cleft palate; one had exophthalmos, four had small and deformed upper extremities, some with suppression of digits. All of them had talipes equino-varus, which in two of the kittens was complicated by complete absence of the tibiæ. There were other deformities. Mr. Clarke attributed all the malformations to the mechanical effects of the abdominal tumour in the dam. Mr. Clarke also showed an anencephalous fœtus with double genu recurvatum, talipes, and proptosis of one eye.—Mr. PARKER regarded the specimens as valuable additions to the pathology of club-foot and similar deformities. The presence of a tumour in the mother was interesting, for he was convinced that it was to the environment that we must look for an explanation of these cases. A mechanical was much more rational than a neurotic origin, fo the children in other respects were usually absolutely normal, and if treated early they recovered completely. They thus differed entirely from nerve lesions, such as talipes from infantile paralysis, in which other evidences of neurotic origin coexisted, such as paralysis, changes in the skin, &c.

Mr. JAMES ADAMS of Eastbourne showed a specimen of Ileo-colic Intussusception caused by an inverted Meckel's diverticulum. The patient, a labourer aged forty-two, hitherto in good health, was attacked with symptoms of intestinal obstruction, but under treatment he recovered, and in a week was able to resume work. In three weeks the symptoms returned, but were not relieved by treatment; the vomiting was only slight, and during the last week of his illness ceased altogether. A small quantity of blood was passed on one occasion after an enema, and there was only an occasional slight rise of temperature. There was some fulness, with dulness in the right iliac region, but no tumour could be made out. Peritonitis supervened, and he died three weeks after the beginning of the second attack. At the necropsy an ileo-colic intussusception was found; the ileum, where it passed with the mesentery through the ileo-cæcal valve, was constricted, black in colour, and evidently on the point of becoming gangrenous. The intussusception had sloughed at its distal extremity, and the two layers, with the mesentery, were all firmly bound together by inflammatory adhesions. In the last inch of the entering layer was found an inverted Meckel's diverticulum; it was seated eight inches from the ileo-cæcal valve, was three inches in length, and was covered with mucous membrane. In its interior, which in its inverted condition was formed of its peritoneal coat, was found a piece of fatty mesentery, which had become adherent through inflammation. He had found two other cases of diverticulum associated with intussusception, one in Guy's and one in St. Bartholomew's Museum, and they also occurred in adult males. He suggested that the process commenced by a dimpling of the free end of the diverticulum, which increased, forming an intussusception of that tube, which finally became completely inverted and hung loose in the lumen of the ileum and then acted like a polypus in producing intussusception.—Dr. PYE-SMITH asked if Meckel's diverticula had been met with in the female subject. He had never seen one, and the point was worth bearing in mind in the differential diagnosis of cases of intestinal obstruction.

Mr. BARLING showed a specimen of Double Acute Tubercular Disease of the Testicle. The body of each organ was affected, not the epididymis, and in each there was a considerable caseous area, multiple patches existing on the left side. In addition to the caseous districts, there was a marked fibrosis of the adjacent parts of the testicles. Tubercle bacilli were found in preparations made from a caseous area, but there were no well-defined giant cell systems; in fact, the condition was one of infiltration with granulation and epithelioid cells, with catarrh of the seminal tubules, followed by caseative necrosis. The organs were removed from a patient aged thirty-one, who attributed his disease to severe exertion at his work; this was followed by swelling of the testicles four or five hours afterwards. When seen five weeks later the testicles were both swollen, the left especially, painful and tender, the scrotum was slightly œdematous, and there was a little fluid in each tunica vaginalis. The swelling appeared to involve the body and the epididymis, and the cord on each side was thickened. The temperature was of the hectic type, ranging from 103° in the evening to normal or subnormal in the morning. The parts about the base of the bladder were healthy, but there was a suspicion of phthisis. The patient discharged himself from hospital, but was readmitted later. The local condition was then less acute, and the temperature at night was only 100°, remitting to 98° in the morning. Castration was performed nineteen weeks after the injury, the temperature at once becoming normal, and the patient's general condition improved markedly afterwards. Mr. Barling believed the condition was a very rare one.—Mr. J. J. CLARKE had recently examined a similar case under the care of Mr. Page. The patient was a publican and an athlete, and the testes became rapidly involved one after the other. One which was removed showed undoubted tubercular lesion. Another instance of bilateral disease coming on extremely rapidly he had met with in a medical student.

Dr. PYE-SMITH related a case showing unusual distribution of Secondary Cancer. The patient was a man aged fifty-eight, a spirit drinker, who was brought into Guy's Hospital with enlarged liver and mental disturbance. There was no vomiting or ascites. Jaundice came on soon after admission, accompanied by delirium, and he died comatose. He regarded it as a case of hypertrophic cirrhosis from drink. The liver was finely granular, tough, and fibrous; the spleen was enlarged. There was also a large malignant ulcerated growth in the posterior wall of the stomach, with a secondary large nodule in the liver, carcinomatous infiltration of the pancreas and secondary growths in the adrenal, thyroid, and lymphatic glands. There was also recent tubercle, with pulmonary gangrene and old tubercular changes in the apices of the lungs.—Dr. CHARLEWOOD TURNER had met with a case in which there was a

primary cancer of the rectum and secondary nodules in the ascending and transverse colon. But the latter growths were explained by the fact that the vermiform appendix had become adherent to the rectal tumour, and infiltrated with growth which had penetrated into the lumen, and so permitted the passage of cancer cells into the large gut. As to the causation of the pulmonary gangrene, though it might not have been due to feeding, yet it was difficult to exclude the possibility of eructations from the stomach having served as a causative factor.—Dr. PYE SMITH, in reply, said that the man did not vomit, and no particles of food could be discovered in the gangrenous part. The facts which he had brought forward went to confirm the view that every cancer had a single primary origin of purely local character, and the secondary growths arose by infection from the primary source.

Mr. EDGAR WILLETT showed a specimen of an Aneurysm of the Aorta in a child aged four. The sac, which was about the size of a walnut, lay in the concavity of the arch of the aorta, with which it communicated by a small opening situated at the termination of the descending portion of the arch. The pathology of this sac and its possible connexion with the ductus arteriosus were discussed, and microscopical sections of the walls were shown. Short clinical notes of the case were also given.—Mr. J. J. CLARKE had recently dissected for Dr. Phillips a specimen in which a caseous gland opened on the one hand into the left bronchus, and on the other into the aortic arch. The patient at first coughed up caseous matter, and later had attacks of hæmoptysis, one of which proved fatal. He showed a case in a child aged three of an aneurysm which appeared to result from inflamed lymphatic glands.

Dr. WALTER EDMUNDS showed a Cystic Adenoma of Kidney, which was removed during life from the body of a girl aged eighteen years. A movable lump in the left lumbar region had been noticed about two years, during which time it had appeared to grow. The tumour was thought to be the left kidney, and so on operation it proved to be. The patient did well. On examining the kidney after removal there was found projecting from its anterior surface a globular tumour; on section this was seen to be about two inches and a half in diameter, and to project internally into one of the calyces. The tumour consisted entirely of cysts of various sizes, the largest being about one inch in diameter. The cysts contained a thin colourless fluid, and were found on microscopic examination to be lined with an epithelium at places cubical, at others columnar. The remainder of the kidney was healthy, and was no doubt working at the time of removal. He had been unable to find either in the Transactions of the Society or elsewhere any record of a similar case; reasons had been given by Mr. Shattock in a paper read before this Society in 1886 (see volume xxxvii.) for thinking that in some cases of cystic disease of kidney the affection was due to the growth of included remains of the Wolffian body; the fact that the tumour was included in a distinct capsule seemed to favour that view in the present case. He was indebted to Mr. Croft, under whose care the patient was, for permission to exhibit the specimen.

The following card specimens were shown:—

Mr. E. WILLETT: Diphtheritic Membrane covering the greater part of the Mucous Membrane of the Stomach of a Child.

Dr. F. C. TURNER: Fibrous Atrophy of Right Adrenal: Hypertrophy of Left.

MEDICAL SOCIETY OF LONDON.

Further Cases illustrative of Hepatic Surgery.

AN ordinary meeting of this Society was held on April 4th, the President, Mr. Hutchinson, in the chair.

Mr. KNOWSLEY THORNTON read a communication on some further cases illustrative of Hepatic Surgery. The paper opened with brief notes of five cases of cholecystotomy, special attention being directed to the method best adapted to the suturing of the gall-bladder into the parietal wound, and to the various methods for dealing with stones when impacted either in the cystic or common ducts. The dilatation of the cystic duct advocated in a former communication was, as the result of larger experience, abandoned for a combination of needling and crushing *in situ* for small impacted stones, and duct incision and removal with subsequent suture of the duct in case of large stones. An interesting case of combination of stones and malignant disease of the gall-bladder (cause and effect) was described. Notes were then given of a probably unique case of removal of a sarcomatous growth from the inside of the cystic duct, and of two cases in which mere exploratory incisions were made, and the following summary of the conclusions arrived at by the author was given: 1. A properly conducted exploratory incision was free from risk, and might give valuable information leading to a scientific and successful after-treatment, even in cases in which no stone was found. Such exploration was, however, only justifiable after the most thorough trial of dietetic and medicinal treatment. 2. The ducts were as completely within the sphere of successful manipulative and operative treatment, when such were needful, as was the gall-bladder itself. 3. Stones of moderate size impacted in the ducts were better treated by needling and crushing, either by finger and thumb or by forceps pressure. Larger stones by incision, complete removal, and after-suture of the duct wall. 4. In cases in which débris was left in the ducts the gall-bladder should be opened, sutured into the abdominal incision, and drained. 5. In cases in which the ducts were incised and sutured a drainage-tube should be passed into the peritoneum beside the sutured duct, and the gall-bladder also drained externally. 6. In a well-marked case of repeated attacks of gall-stone colic, with recurring distension of the gall-bladder, it was better to operate early and before there was a chance of injury to the duct wall by impaction, and before the stone had reached the common duct. Such cases recovered rapidly, and there was every prospect that experience would show that complete intra-peritoneal suture of the wound in the gall-bladder would be safe and the rule of the future when operation preceded damage to the ducts from impaction.

The PRESIDENT remarked on the uniform success of the series. He himself had been much interested in the diagnosis of gall-stones and in estimating the amount and intensity of pain caused by them, and often referred to other causes. He had operated on only one case.

Dr. DOUGLAS POWELL said that the needling and manipulation of a stone in the duct were to him a novel procedure. Mr. Thornton seemed to regard the gall-bladder not as a reservoir for bile, but as a receptacle of fluid with which to wash out the bile-duct. He himself would like further evidence in support of this before accepting it, for it certainly impaired the value of some experiments which had been made as to the secreting function of the liver, seeing that the material used had been derived from the gall-bladder.

Dr. RALFE, though he admitted that surgeons had relieved physicians of many of these troublesome cases, yet held that there were instances in which it would be better if they waited longer before operating. In one case in which cholecystotomy was done the gall-bladder was found empty and cancer discovered to be present. In another case, in which operation was urgently recommended, the patient got well with rest and the use of mineral waters. Many attacks of so-called gall-stone colic were spurious and due to other causes, such as a collection of scybala at the hepatic flexure of the colon; or, as in one instance, the presence of a large round worm. Medical treatment should certainly be carefully tried before operative interference was thought of.

Mr. KEETLEY related a curious case that came under his care at the West London Hospital. A man had been ill six months, and had twenty attacks of biliary colic. He opened his abdomen and found the gall-bladder small and thickened; but careful palpation of both it and the ducts revealed no calculi. The patient made a rapid recovery, and gained strength. The hernia, which frequently developed at the site of the abdominal wound, was due to a want of correct apposition of the aponeuroses and fibrous elements of the abdominal walls one to another; cases left open for drainage were likely to prove defective in this respect.

Dr. BRISTOWE said that though medicine relieved the pain and promoted the passage of gall-stones in many instances, yet there were some in which he advocated the intervention of a surgeon. He related three cases of sharp attacks of colic in young persons in whom there was no jaundice, but who afterwards passed small stones. He referred to the case of an elderly gentleman who had an attack of gall-

stone colic accompanied by jaundice. The latter persisted for twelve months, at the end of which time there was a recurrence of colic, a gall-stone passed, and the patient recovered. A lady suffered a series of attacks of colic; after an attack laparotomy was performed, but no stone could be found. A young woman was attacked with hepatic colic and became seriously ill. At an exploratory laparotomy no stone could be detected, but the gall bladder was opened and stitched to the abdominal wall, and for some time after she passed all her bile that way. Later she died of profuse hæmorrhage in the deeper part of the wound; at the necropsy both the gall-bladder and the duct, before being opened, were carefully palpated by two or three observers, and nothing could be felt. Nevertheless on opening the common duct a calculus was found therein.

Mr. MARMADUKE SHEILD said that in the diagnosis of smaller abdominal tumours, such as gall-stone or movable kidney, it was necessary to submit the patients to a preliminary and thorough course of purgation. Gall-stones often existed without causing any symptom, and were very frequently found post mortem where they were by no means suspected. Abscesses of obscure formation, pointing in the right iliac fossa, at the umbilicus, or through the abdominal wall, often when they burst discharged a quantity of gall-stones. The case related, in which healing took place in spite of the fact that malignant disease of the gall-bladder was present, was interesting; but bones which fractured as the result of malignant disease would firmly unite, and so would the cut surfaces of a peritoneum which had undergone malignant infiltration. He asked what was the value of massage in cases of impacted gall-stone.

The PRESIDENT added that he could not accept the theory which had been put forth as to the function of the gall-bladder, for that structure in the fœtus was proportionately so very large. Although the Society highly appreciated the successes that had been recorded, yet he felt bound to enter a caution against any attempt at imitating these procedures among the profession generally. The public should not be taught to look upon gall-stones as substances which, like urinary calculi, when found ought to be removed. They were constantly found, for instance, in lunatics, especially melancholiacs, with no symptoms whatever. It was not the mere recognition of stones in the gall-bladder, but the suffering which patients endured from them, that should be the measure of the necessity for operation, and in this respect there was an essential difference between gall and urinary calculi; besides, they were all aware of cases which after operation had not proceeded to so happy a termination as those of the author seemed to have done. Perhaps a little later he would supplement the procedure of crushing the stone by flushing and washing out the fragments. In conclusion, he related the history of two females who had had gall-stones for as long as twenty years, and though they had suffered much from them at first, yet at present the symptoms had entirely subsided, although the calculi were still to be felt.

Mr. THORNTON, in reply, said that in his paper he had carefully defended himself from the assertion that he desired to operate on all biliary calculi. Though he agreed that in many cases they did no harm, yet against such cases were to be put others in which perforation and gangrene of the duct occurred, and the patient died in a few hours. It would be difficult to evacuate the crushed calculi, because one was dealing with a closed duct through which nothing could be washed, and which was therefore quite unlike a pervious urethra. He agreed that a thorough clearance of the intestines was necessary before arriving at a diagnosis. There was often no jaundice and no vomiting until the stone arrived in the common duct; but the case might prove fatal before this happened. He could not recommend massage as a method of treatment in these cases, for in two in which it was resorted to he found on operation that the stone had grown into the duct wall, and manipulation from without could only have ruptured the duct. Though occasionally cases could be met with which, after twelve months, had come to such a happy termination as that related by Dr. Bristowe, yet he doubted whether it would be right for a surgeon to wait beside a jaundiced patient for twelve months for the possibility of the stone moving. He related an instance in which he was unable to feel the presence of a stone which he afterwards found on opening the gall-bladder

EPIDEMIOLOGICAL SOCIETY.

The Bacteriology of Vaccine Lymph.

A MEETING of this Society was held on March 17th, Joseph Ewart, M.D., President, in the chair.

Dr. S. MONCKTON COPEMAN began by remarking that the determination of the nature and actual virus of vaccinia had hitherto baffled all inquiry; and that, notwithstanding the importance of the subject, the practice of vaccination was as yet empirical. Some, indeed, reflecting on the failure of all attempts at the extra-corporeal cultivation of the virus, had suggested that it was not an organism, but a chemical substance, or enzyme; and with the view to decide this question he had repeated the experiments of Cohn, Chauveau, and Burdon-Sanderson, from which they had concluded that the activity of the lymph resided in the solid particles rather than in the fluid portion. Dr. Copeman having obtained 2 cc. of calf lymph, diluted it with 4 cc. of a 50 per cent. solution of glycerine, which had the effect of increasing its fluidity and retarding coagulation during filtration, enhanced rather than otherwise its activity, or with a normal saline solution; using with strict antiseptic precautions a Kitasato's filter worked by an aspirator, he obtained filtrates absolutely free from all particles whatever. Inoculations of the filtrate on human beings and calves were uniformly unsuccessful; but the observation of Dr. Sidney Martin, in the course of his experiments with the anthrax bacillus, that if any of the alkali albumen in his artificial serum failed to be converted into albumose, it was retained in the filter, convinced him that these negative results were not conclusively confirmatory of the point at issue. He had himself found that while the serum, albumen, sugar, and salts of milk passed through a porcelain filter, the caseine as well as the oil globules were arrested, and it was therefore possible that a like proteid in the lymph, and not any of the particulate bodies, constituted the active principle, and that in the subsidence process of Chauveau and others it might have been carried down by the bacilli, so that neither the positive nor the negative results obtained under either procedure were conclusive in favour of the theories of Chauveau and Burdon-Sanderson on the one hand or of Cory on the other. In the hope of identifying the nature and action of the several bacteria, he next undertook a number of artificial culture experiments with calf lymph, sowing by both the "streak" and "stab" methods nutrient gelatines, agar-agar, and agar-agar with glycerine. These inoculations were invariably followed by luxuriant growths, the appearances of which he described, a feature common to all being that the parts of the growth most exposed to the air presented a marked colouration, more or less yellow or orange, especially in gelatine. Plate cultivations with portions of these masses enabled him to identify (1) micrococcus pyogenes aureus, (2) micrococcus cereus flavus, and (3) micrococcus albus or epidermis, results agreeing with those of Pfeiffer and apparently also of Buist. He also obtained an organism which he believed to be the streptococcus pyogenes. Inoculations with pure cultures of each of these on the human being, calf, and rabbits never produced more than the most trifling inflammation, and nothing in the least resembling vaccination, though one rabbit died apparently of septicæmia after a free inoculation with a mixture of all four. Thinking it possible that the luxuriant growth of these might have destroyed the specific organism, he sought by following the procedure by which Kitasato had successfully eliminated foreign microbes and isolated the bacillus of tetanus—viz., subjecting the tubes to a temperature of 60°C. for various periods, and making plate inoculations direct therefrom — to isolate in like manner that of vaccinia, but entirely without result. Inoculations of calves with lymph from the tubes thus treated and with fluid from the alkali albumen were equally unsuccessful, showing that the specific microbes, if any, had also been killed. After confirming Dr. Husband's observation that the activity of vaccine lymph was not impaired by exposure to a temperature of 33°C., Dr. Copeman found that the critical point was between 38° and 42°, and what was now wanted was the discovery of a suitable culture fluid. A remarkable result was, however, observed in the inoculation by Dr. Cory of a calf with lymph that had been heated to 48°. No vesiculation followed, but the animal proved refractory to subsequent

inoculations with fresh lymph of ascertained activity, showing that a degree of immunity had been conferred, possibly by the products of a microbe that had itself perished in a manner analogous to the experiments of Roux and Yersin with the products of the bacillus (Löffler's) of diphtheria. Such a method would of course preclude continuation by arm-to-arm vaccination, but it certainly seemed that lymph heated to 40° only, and thus freed from the organisms he had described, was considerably more energetic than fresh lymph, for the calf that, after inoculation with superheated lymph, had resisted the effects of fresh lymph of proved activity yielded to a subsequent inoculation with the lymph thus "purified," exhibiting five well-developed vesicles. Turning his attention next to the cloudiness that constantly appears in stored lymph, with impairment of its potency, Dr. Copeman put up a number of tubes, intentionally interrupting the lymph with air bubbles, and kept them for several weeks in a vertical position. Points of opacity appeared at the lower end of each separate column of lymph, showing that, though dependent on the access of air, the material of the opacity was heavier than the lymph, and subsided accordingly. It was not caused by coagulation, for the phenomenon was seen best in tubes the contents of which remained perfectly fluid throughout, and the white points in others were entangled in the fibrinous threads. Tube and secondary plate cultivations in gelatine with portions of this opaque substance showed it to be composed of aerobic organisms present in the lymph from the first, although in minute numbers. Careful exposure of the lymph to a regulated temperature checked or arrested the growth of these organisms, and thereby enhanced the potency of the lymph, but always involved the risk of overdoing it, and thus impairing its activity; but the desired result could always be attained by the simpler and safer procedure of dilution with a 50 per cent. solution of glycerine, even to the extent of twice or thrice its volume. Glycerine, which was well known to act injuriously on many pathogenic organisms, had evidently the effect of inhibiting the growth of these extraneous aerobes which not only gave rise to the familiar cloudiness, but tended to impair the activity of the lymph. Indeed, it was possible, though he could not speak with certainty, that in the presence of glycerine there was a positive increase of the specific organisms or active principle, and its employment was on every ground to be recommended as a means of securing better and more uniform results.

Staff Surgeon PRESTON, R.N., referred to the frequency with which lymph, carefully put up with boric or salicylic acids for exportation to the colonies, had been found on arrival to be quite inert, a result ascribed to the high temperature—viz., 96° F.—to which it had been subjected on the passage, to avoid which it was now forwarded to the China stations by the Pacific Railway, and endeavours were being made to keep up a supply of calf lymph in Australia. He asked whether light had any injurious effect on the activity of the virus. He had successfully used lymph that had been stored for two years or more, but the tubes had been kept in absolute darkness—viz., in clinical thermometer cases. He also wished to know if anything positive had been established as to the apparent mutual antagonism of vaccinia and syphilis, whether congenital or acquired.

Dr. HUNTER considered the presence of streptococci a very grave matter, since they were at least closely allied to those that gave rise to erysipelas and spreading inflammations. If the virus of vaccine were an enzyme it would doubtless bear without impairment a temperature of from 55° to 60° C., which would certainly kill all these microbes; otherwise it would, like other micro-organisms, perish at 45°, and glycerine offered the only means of keeping down these extraneous organisms.

Replying to questions by Sir W. Moore and Dr. Bulstrode, Dr. COPEMAN said that it was not quite correct to speak of "corpuscular" elements, for good lymph should contain no blood, or pus cells, or any leucocytes whatever. The extraneous microbes were not strictly aerobic, though they throve much better in the presence of air. Their numbers depended on the circumstances of its collection, but they were usually more numerous in calf lymph from the greater difficulty of securing cleanliness. The micrococcus epidermis, however, could not be wholly excluded, even by shaving and washing the skin with sublimate. It was now established that no bacteria existed in the fluids or tissues of the healthy body, and those present in the vesicles were the progeny of such as had been introduced with the lymph in the act of vaccination. Light acted injuriously on some, not on all pathogenic organisms, and probably on those of vaccine; but the failures referred to by Mr. Preston were more likely due to the antiseptics employed, for a temperature of 96° F. (36° C.) was certainly not high enough to produce such a result. The fact of the virus being reproduced in the living body through an indefinite series of transmissions was sufficient to prove that the active agent must be a living organism capable of self-multiplication. The immediate cause of the phenomena might indeed be, and probably was, as in other diseases, a product of the microbes, but it could not be merely a chemical substance the quantity of which must be limited. He admitted a certain apparent antagonism between vaccinia and syphilis, but the fact that they could be produced together by a single inoculation proved it to be very feeble. Erysipelas was, in the vast majority of instances, the result of subsequent infection from independent sources, the vaccination contributing nothing beyond the breach of surface for the entry of the microbe of erysipelas. Still, if by greater precautions in the operation and the selection of lymph and by the use of glycerine in storing it, these extraneous though ever present aerobic microbes, which, if they did not often set up unpleasant processes of an inflammatory nature, did certainly detract from the success of the operation and the completeness of the protection afforded, and still more if this elimination of all foreign organisms could be effected by exclusively artificial culture, the opposition to compulsory vaccination would be disarmed, if not entirely overcome.

HARVEIAN SOCIETY OF LONDON.

Transposition of Viscera.—Enlargement of Liver due to Chronic Hyperæmia.

A CLINICAL EVENING was held on March 17th, Dr. W. B. Cheadle in the chair.

The PRESIDENT exhibited cases of considerable clinical interest, the first being one of Transposition of the Viscera. He said that the patient, a boy of sixteen, had been admitted into the hospital with pleurisy and effusion into the left side. The position of the heart on the right side was at first attributed to mere displacement from this cause; as the fluid subsided, however, it became clear that this abnormal condition was due to transposition, the stomach, liver, and spleen being transposed in like manner. The transposition of the thoracic and abdominal organs was probably complete throughout. In every instance in which post-mortem examination had been made, and these points noted, this was found to be so. Not only is the heart on the right side, but its cavities and vessels reversed, and the right recurrent laryngeal nerve wound round the aortic arch instead of the left. The right lung has only two lobes; the left three. The liver lies on the left side, with its lobes reversed; the stomach on the right side, with the cardiac to the right, the pyloric extremity to the left. In the intestine the cæcum lies in the left iliac fossa, the sigmoid flexure on the right. The left kidney lies lower than the right; the right testicle lower than the left—the converse of the normal conditions. In one case the patient was left-handed, but in others normally right-handed, as in the present instance.

The two next cases were examples of Fibroid Enlargement of the Liver due to long-standing Chronic Hyperæmia. Dr. CHEADLE said that he brought them forward as illustrations of the special tendency in early life to rapid and profuse proliferation of the fibrous stroma under such conditions. The first of these two cases was that of a boy of twelve suffering from mitral incompetence, very probably also from thickened adherent pericardium and mediastinal fibrosis. The symptoms had been of that persistent and recurrent kind so characteristic of subacute pericarditis and mediastinitis in children—viz., persistent præcordial pain and moderate pyrexia of from 100° to 101°; rapid pulse of 100 to 140; constant cough and dyspnœa, without affection of the lung: all lasting, with slight remissions only, for several months, and accompanied by steady advance of cardiac dulness upwards and muffling of the heart sounds. A doubtful friction sound only was heard, but there was a loud mitral murmur. Some general dropsy followed, and the legs were tapped on the 14th of May last. As the liver engorgement and fibrosis advanced, ascites developed, and attained such proportions that the abdomen

was tapped six months later, on the 9th of November last, 240 ounces being drawn off. It was worthy of note that the fluid had not since returned either into cellular tissue or peritoneal cavity, so as to render a second tapping necessary, showing the value of early draining in such conditions. The case also illustrated the beneficial effect of opium in conditions of cardiac distress. Marked relief and improvement had followed its free use in this instance. There was an impression that the administration of opium in such cases was attended with danger, but it might be used without fear to relieve cardiac dyspnœa, unless the engorgement of lungs and cyanosis were extreme.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY.

Lumbago and Sciatica.

AN ordinary meeting of this Society was held on April 1st, the President, Dr. Chas. Wells, in the chair.

Mr. KEETLEY showed a girl aged twelve on whom he had performed partial Thyroidectomy for removal of a large fibro-cystic growth, and exhibited the specimen.

Dr. HERRINGHAM read a paper on Lumbago and Sciatica. He described a case in which lumbago had been accompanied by sciatica and by so-called rheumatic pains in the muscles of the shoulders and in the musculo-spiral nerve. He attributed this collection of symptoms not to a primary neuralgia, but to an affection of fibrous tissue involving the nerves by pressure, though he confessed that opportunities were so rare to examine the tissues post mortem that this view was rather an inference than an observation. The localisation of the disease was unexplained. Many other parts of the body, never affected, seemed quite as fitted by anatomical disposition to take on such morbid action—nor, indeed, was it clear why the sciatic nerve was so noxious to disease. Besides direct injury, as in parturition and probably in jolting, cold, damp, and indigestion, either the gastric or the constipating variety, were the only well-known causes. Of the twin means of treatment, preventive and curative, the former were by far the most valuable; of the latter, for lumbago he recommended strong purging above all others; for sciatica, rest, warmth, and patience. He thought that diet had little or no effect. He had had the opportunity of testing the excretion of uric acid, and had found that it had no connexion with the disease. Continuous regulation of the bowels he had found to be of great value. He concluded by citing cases of similar affections of other nerves, of the anterior crural, and of the brachial plexus.

Dr. SYMONS ECCLES read a paper on Sciatica, giving his experiences of fifty-two cases treated by combined rest and massage. He divided his cases into three groups: 1. Those with long-standing lumbo-sacral pain; in ten of these cases constipation seemed to be the exciting cause. 2. Peri-neuritis with "tender points," but without any vaso-motor changes. 3. Neuritis, in which there were evidences of trophic dyscrasia. The loss of knee-jerk noted by some he thought to be apparent rather than real, and due to subjective disinclination to excite an exacerbation of pain. He had noted pelvic visceral disease and sigmoid constipation as causes of this painful condition. He pointed out the importance of guarding against chill, and advocated the use of warm woollen underclothing by day and night. In conclusion, the author claimed the scientific use of massage and galvanism (from ten to fifteen milliampères) as a valuable means of cure.

MANCHESTER MEDICAL SOCIETY.

WEDNESDAY, MARCH 16TH.

Mr. A. W. STOKES, President.

Venous Pulsation.—Dr. MACKENZIE (Burnley) gave a demonstration of a means of graphically recording pulsation in the veins, whereby the movement of the apex beat or carotid pulse could be employed to time the events occurring in the veins. The essential features in the method were the covering of the vein or other pulsating part with a small leaden funnel. This funnel was connected by an elastic tube with a tambour, the lever resting on which recorded the movements communicated by the vein on the smoked paper of a revolving cylinder or Dudgeon's sphygmograph. The veins of which the pulsations were recorded were mostly the internal jugular, but tracings were also shown from the axillary vein, the femoral vein, and from the liver. The conclusions arrived at from the consideration of a large number of cases were summarised as follows:—Pulsation in the veins arises when from any cause dilatation of the right heart and great veins, with incompetency of the tricuspid and venous valves, takes place. While the auricle can vigorously contract there is a wave synchronous in time with and caused by the auricular systole (auricular wave). When the dilatation of the heart and veins is moderate, the auricular wave is followed by a great depression synchronous with and caused by the auricular diastole (auricular depression). In most cases there is a wave produced by and synchronous with the latter portion of the ventricular contraction (ventricular wave). The greater the incompetence of the tricuspid valve and the greater the distension of the auricle, the earlier does the ventricular wave appear, and the larger space of time it occupies. The ventricular wave in cases of extreme dilatation of the right heart may occupy the whole period of ventricular systole; the depression caused by the auricular diastole is then replaced by the ventricular wave. In such rare cases the auricle has ceased to contract independently, or its contraction is represented by a very small wave preceding the ventricular wave. The great depression then shown in tracings of the venous pulse is caused by and synchronous with the ventricular diastole (ventricular depression).

MIDLAND MEDICAL SOCIETY.

WEDNESDAY, FEB. 27TH.

Mr. BENNETT MAY, F.R.C.S., President, in the chair.

Mr. CHAVASSE showed a case of Nævus Pilosus occupying the entire half of the face in a girl seventeen years of age. The hair on the scalp of the affected side was thicker, coarser, and of a darker colour than on the normal side. Although congenital and progressive, the parents had not permitted any steps to be taken to retard the growth. Mr. Chavasse also showed an Alveolar Sarcoma occurring in the cicatrix of a shoulder-joint amputation undertaken eight months before for a mixed-celled growth in the lower third of the arm, the patient being a man aged fifty-three. To effectually remove the infiltrated tissues it was necessary to resort to Berger's method of dealing with the subclavian vessels and removing the scapula and two-thirds of the clavicle.

Vesical and Renal Calculi removed from the same Patient.—Mr. F. MARSH exhibited five calculi, two of which, weighing fifty-two grains, he had removed from the bladder on Jan. 29th, 1891, and three, weighing fifty-four grains, from the right kidney on Feb. 11th, 1892, of a man aged twenty. According to the patient's statement the symptoms were of about seventeen years' duration. When about three years old he suffered from pain in the right loin, with hæmaturia and increased frequency of micturition. The pain had been almost constant ever since, was worse after exercise, and sometimes shot downwards. The hæmaturia and increased frequency of micturition were intermittent; the former was well marked, and usually lasted for from ten to fourteen days. When he was fourteen years old the hæmaturia ceased. He has had no distinct attacks of renal colic. When he came to the Queen's Hospital in January, 1891, he had symptoms pointing to calculus both in the bladder and right kidney. He was admitted, and the vesical calculi were removed by suprapubic lithotomy, the wound healing in ten days. The calculi were chiefly composed of urates, and the smaller one did not appear to have been long in the bladder. The man was therefore advised to wait for a time before having the kidney exposed. When he came again to the hospital, in December, 1891, he still had the renal symptoms and was also suffering from frequent seminal emissions, which was really the reason of his attendance at the hospital. He was treated for this for a short time and then admitted with a view to nephrotomy, but a suppurative inflammation of the right middle ear developing, the operation was postponed for a few weeks until this was cured. During this time the urine was repeatedly examined, and occasionally a few pus-cells were seen, but never any blood-cells or crystals; the percentage of urea was normal. Percussion or

pressure over the right kidney always caused pain, more marked on the anterior than on the posterior surface. No pain could be elicited by manipulation of the left side. There was no clear history of renal colic. Right lumbar nephro-lithotomy was performed on Feb. 11th, 1892. One calculus was felt embedded in the kidney tissue on the anterior surface and removed by an incision directly over it. It was about the size and shape of a small marble covered with little spikes, and was probably the cause of much of the pain. The second (the largest) and the third (the smallest) were removed respectively from a calyx and the pelvis by a fresh incision through the kidney substance. The first stone was composed almost entirely of oxalate of lime, and the two others chiefly of urates, the third one having a striking resemblance to the smaller one found in the bladder. The different layers of muscles were carefully approximated by buried sutures of silkworm-gut. A drainage-tube was inserted down to the kidney for forty-eight hours. The wound healed by first intention, no urine coming through it. For a week a fair amount of blood was passed with the urine; it then became clear, and the average daily amount since passed has been approximately forty ounces.

Mr. EALES showed a man aged twenty-four years who had a Sinus opening through the Upper Lid close to the nose and reaching in a direction almost directly backwards for about two inches. Fluid injected into the sinus came down into the nose. Mr. Eales stated that this man first came under his notice on Feb. 17th complaining that in a brawl on Dec. 8th he had been struck by another man who had his pipe in his hand when he struck at him, and that ever since the sinus had existed and would not heal. He was at once put under chloroform, the opening of the sinus enlarged and examined, when a hard substance was found and extracted by forceps, which on examination proved to be the vulcanite mouthpiece of a tobacco-pipe, broken off and measuring exactly two inches in length. Mr. Eales likewise showed a lad aged thirteen who was suffering from a Ruptured Globe. The lens was displaced into the vitreous. The retina was detached (T = − 2) and the sclerotic was ruptured below for a considerable extent about the equator, the anterior parts of the eye being unruptured.

SHEFFIELD MEDICO-CHIRURGICAL SOCIETY.

THURSDAY, MARCH 24TH.

Mr. W. F. FAVELL, M.R.C.S., President, in the chair.

DR. CLEAVER showed a specimen of Arrested Development of the Œsophagus from an otherwise healthy male infant, born at full term. As the child was unable to swallow, an unsuccessful attempt was made to pass a catheter down the œsophagus, and thus inject the milk. The child lived for six days and a half. On post-mortem examination, the œsophagus was found to end in a cul-de-sac at the level of the bifurcation of the trachea, from which point it was continued to the stomach as a mere membranous structure.

Mr. T. ROBINSON showed a female patient with "Argyria." Nitrate of silver had been prescribed six years before for sickness connected with uterine disease. She had taken it at first for about twelve months, and four years later she again took it for three months, of her own accord, for similar symptoms. Altogether she took about 340 grains of nitrate of silver. The discolouration, which only became marked after the second administration, was confined to the face almost entirely, the exposed part of the conjunctiva being slightly tinged. There was no blue line on the gums.

Dr. HUGH RHODES showed for Mr. A. JACKSON a case of Charcot's Disease of the shoulder and knee in a man aged sixty-two. There was a history of syphilis at seventeen years of age. The illness began seven years before with lightning pains, gastric crises, and increasing ataxia, which spread from the legs to the arms. The shoulder became diseased six years before, and the knee four years later. Both joints were very typical examples of Charcot's disease, the mobility, especially in the shoulder, being increased, and the onset of the affection nearly painless. Much of the shaft of the humerus was worn away, and the head of the bone could be put into the position of nearly all the dislocations. The circumference of the knee was four inches greater than that of the opposite joint. There was effusion into both joints, and the articular surfaces were eroded and grating.

Mr. C. ATKIN also showed a man with old-standing Charcot's Disease of the knee, who had been shown to the Society some years before.

Dr. BURGESS showed two cases of Friedreich's Disease. One a girl aged twelve, with marked tabeto-cerebellar gait, swaying of the trunk, and slow nodding of the head. Superficial reflexes present; knee-jerks absent. No ataxia of the arms; speech unaffected. The difficulty in walking was first noticed four years before, after an attack of scarlet fever. The patient was the eldest of the family living, and none of her brothers and sisters were similarly affected. The other patient was a man aged twenty-six, with ataxic gait, nodding of the head, twitching of the mouth, and distinct affection of the speech. A sister was said to be similarly affected. Superficial and deep reflexes were exaggerated. Both feet were high-arched, with claw-like condition of the toes and prominent extensor tendons. There was no pain or any sensory disorder; no evidence of syphilis. He first noticed that he staggered in the dark four years before, and had gradually become more and more unsteady. For the last three years he had found it an effort to talk. A shoemaker by trade, he had found difficulty in aiming with his hammer for the past two years.

Mr. R. J. PYE-SMITH read a paper on the Disposal of the Dead. He contended that the altered conditions of modern town life, as well as the dangers of our present system of burial, required a reconsideration of this question. The encasing of the body in a wooden coffin and burying it deep in the earth or in a vault he characterised as the worst possible compromise between the antagonistic aims of preserving a body as long as possible and of hastening its disintegration. He maintained that the substitution of a perishable coffin of *papier mâché*, or of paper covering a light iron tray and frame, would prevent the pollution of air and water; and that burial at a depth of nine feet in cases of infectious disease would be an effective check to their danger. On this point he referred to the observations of Darwin and Pasteur, showing that earth-worms, by the medium of which such diseases might be transmitted, never burrowed deeper than eight feet from the surface; also quoting Flügge to prove that few pathogenic bacteria could grow in the cold earth, and that both soil and air had a direct influence in preventing the formation of ptomaines. He further referred to Dr. Poore's experiments on the filtration of urine as indicating the small risk to the watercourses from earth-to-earth burial. Mr. Pye-Smith advocated shallow graves, the systematic planting of trees, shrubs, and flowers, and no reinterment in the same spot within at least twenty-five years. Finally, as an argument in favour of rational interment rather than cremation, he urged that nature needed the products of animal decay for the growth of the vegetable kingdom, on which we in turn depended for our sustenance and wealth.

NOTTINGHAM MEDICO-CHIRURGICAL SOCIETY.

WEDNESDAY, MARCH 16TH.

Mr. ANDERSON, F.R.C.S., President, in the chair.

Operation in Chronic Intestinal Obstruction.—Mr. GRAY read a paper on this subject. He related four cases, in the first of which the symptoms were acute; but, as the result showed, there was no real obstruction. In the other three cases there was an acute attack following symptoms pointing to obstruction, varying from six months to ten years in duration. In two cases a band was found post mortem, under which a large quantity of small intestine was partially strangulated; in one case the band was peritoneal, and in the other formed by adherent small intestine. The four cases were contrasted to show the difficulty of deciding when to give up ordinary measures and when to advise operation in the face of apparent improvement. Stress was laid on the inadvisability of giving opium until the diagnosis was made, in consequence of its tendency to mask symptoms. The operation of laparotomy was described, and the recommendation given to commence the search for the obstructed portion by following the course of the empty coils of intestine lying in the pelvis. The causes of the

high mortality of these operations were discussed, and a parallel drawn between them and herniotomy. The opinion was expressed that when laparotomy came to be looked upon as a primary measure instead of a last resource the mortality would fall nearly to the level of that of herniotomy.

Dr. HANDFORD showed a patient suffering from Intermittent Albuminuria with general vascular sclerosis, who had been greatly benefited by treatment with iodide of potassium.

Reviews and Notices of Books.

Lectures on Pathology. Delivered at the London Hospital by the late HENRY GAWEN SUTTON, M.B., F.R.C.P. Edited by MAURICE EDEN PAUL, M.D., and Revised by SAMUEL WILKS, M.D., LL.D., F.R.S. London: J. & A. Churchill. 1891.

WHEN, five years ago, a small volume of the late Dr. Sutton's lectures was published, the work, notwithstanding certain blemishes in composition, attracted universal attention for the freshness of style, the originality of conception, and the profundity of thought that were evinced in it. Never before had the prosaic subject of morbid states been dealt with in so entrancing a manner, and all who read it must have envied the students who sat at the feet of a master whose descriptions of disease were accompanied by suggestions and practical inferences that could not fail to rivet attention and excite admiration. It must be borne in mind that these lectures, which are incorporated in the present much enlarged and more carefully edited volume, were transcribed as they were orally delivered, so that, although some objection may be taken to their discursive character, they represent faithfully the spoken words and the thoughts which seemed to rise in the lecturer's mind as he passed from topic to topic. By means of the additions now made, the text embraces nearly the whole range of diseases; but it must not be supposed that it is exhaustive in the sense of anatomical description. Dr. Sutton recognised that the word "pathology" embraces much more than mere anatomy, and he included in his purview questions of etiology, of bedside observation, and of therapeutical measures, when considering the disorders of function which are linked with anatomical lesions. Herein rests one great charm of these lectures, which mark the liberation of the *rôle* of teacher from the limits imposed by the ordinary text-book or by the examining board. We can imagine how the student must have looked forward to a lecture which did not aim at reproducing in routine fashion and orderly array the facts of pathological investigation, but which served to explain and illustrate the lessons learnt in the ward and post-mortem room by reference to a wide experience and the results of deep reflection.

The volume, however, will, we imagine, be even more highly valued by those already engaged in practice, since it embodies the views of a physician who had freed himself from the trammels of tradition, and who, in his dealings with disease, always held in view the natural physiological laws that govern the body in health, so that he laid more stress upon the leading principles of rest and nutrition than upon the results of pharmacological researches in promoting restoration to health. It may be that Dr. Sutton's wide pathological knowledge led him to depreciate the value of drug treatment; but those who study his words will see that he does not discard this altogether, but reserves it for those conditions where the direct influence of remedies is obvious. He knew well that the patient requires *advice* as much as, and more often perhaps than, medicine; and one cannot wonder that such a man, who always had before him the possibilities of recuperation that lie latent in the organism, should become a successful practitioner. We will not anticipate the pleasure which every reader of this book will gain from its perusal by citing passages from it here, although it would not be difficult to select many which for terseness and force deserve to be remembered as aphorisms; whilst there are other sayings which at first seem to run counter to all the reader's cherished opinions, although on reflection they may be found to contain truths of great value. In a word, we are very grateful to the friends and pupils who have furthered this publication; and in closing a book which no one who has read once will fail to return to again and again, we cannot but regret that so acute and philosophical an observer has not left behind him more of the products of his fertile mind to instruct and delight posterity.

Essays on Acromegaly. By Dr. PIERRE MARIE and Dr. SOUZA LEITE. With Bibliography and Appendix of Cases by other Authors. London: The New Sydenham Society. 1891.

ACROMEGALY was the term applied to a pathological condition by Dr. Pierre Marie, who first clearly identified it, and whose essay is given in this volume. It belongs to the class of affections which produce such a striking change in the conformation of the body as to be recognisable at first sight; and it is characterised by a giant-like overgrowth of the peripheral parts of the body, the bony framework as well as the soft tissues. So striking is this progressive alteration in the frame that it is singular it should have been identified as a distinct condition only some seven years ago; but the bibliography and records contained in this volume (which is edited and translated by Mr. Procter Hutchinson) comprise, in addition to the writings of Marie and Souza-Leite, several cases which were recorded years before these essays appeared. It is interesting to note that one of the earliest of these is a case brought before the Pathological Society in 1857 by the late Mr. Oliver Chalk under the title of "Partial Dislocation of the Lower Jaw from an Enlarged Tongue." This case, which seems undoubtedly one of acromegaly, was further remarkable from the fact that the changes commenced in quite early life, and at the time of its record the face was much elongated by the hypertrophy of the lower jaw, which projected about an inch in front of the upper jaw; whilst the tongue occasionally protruded for some distance beyond the line of the teeth. Mr. Hutchinson has added to the cases collected by Dr. Souza-Leite notes of those published since the date of that essay, so that the volume contains practically all that has been written on the subject. One feature of singular interest is the fact that in nearly all the cases examined after death (and they are but few) the pituitary body has been found greatly enlarged. There is no doubt that this publication will stimulate inquiry into the subject and probably result in many additional cases being brought to light. There is, unfortunately, one blemish in the book, and that is the roughness and indistinctness of the woodcuts, which have been reproduced from old blocks, and are quite unworthy of the text.

Studies in Anatomy in the Anatomical Department of the Owens College. Vol. I. Manchester: Cornish. 1891.

PROFESSOR A. H. YOUNG has collected and edited a large number of papers containing original researches in anatomy conducted by himself and his demonstrators during the past three or four years. Some of the papers have not been previously published, whilst others are reprinted from the "Journal of Anatomy and Physiology," and other publications. The most important of the unpublished investigations are those of Professor Young on the Termination of

the Mammalian Aorta, with Observations on the Homologies of the Pelvic Arteries; of Dr. A. Robinson on the Development of the Posterior Columns, the Posterior Fissure, and of the Central Canal of the Spinal Cord, and on Abnormalities of the Venous System and their relation to the Development of Veins. These papers are of considerable importance, and of great interest to the anatomist, and are well illustrated. Mr. J. W. Smith, in an account of Some Muscular Anomalies in Human Anatomy, describes an instance of complete absence of the sterno-hyoid muscle on both sides in a female subject, who presented many other irregularities in the muscular system; he also discusses several important variations of the well-known "achselbogen" and "sternalis" muscles with regard to their derivation and innervation. The volume shows how ably and thoroughly anatomical research is carried on at Owens College, and Professor Young must be congratulated on being able to publish such a series of valuable investigations.

OUR LIBRARY TABLE.

Die Menschliche Stimme nach Charles Lunn's "Philosophy of Voice." Von LUDWIG J. TRÜG. Pp. 124. Düsseldorf: L. Schwann. 1892.—Charles Lunn was a singer with a fine tenor voice, who established a School of Music in Birmingham in 1866, the teaching in which was highly esteemed by experts both in England and abroad. The method adopted was that of the old Italian school. The present work is an attempt to resuscitate it. The author commences by giving directions as to the mode of breathing to secure the best results, and a slight sketch of the anatomy of the larynx. The following sections describe the different registers, the relations of the male to the female voice, the theory of the voice, and the mode in which it may be exercised and strengthened. It is comforting to know that so few sing well, not because they do not possess a properly constructed organ, but because they do not educate it. The translation appears to be correctly done.

Tuberculosis and its Successful Treatment. By ROBERT BELL, M.D., F.F.P.S., &c. Glasgow: David Bryce and Son.—This essay is intended to show that the proper line of treatment of infective disease in general, and of tuberculosis in particular, is to afford support to the vitality of the tissue cells of the invaded organism; and it is therefore based largely upon the acceptance of the truth of the doctrine of phagocytosis. It constitutes also a plea for the prescription of muriate of calcium in tubercular diseases, the continued use of which has, in the author's hands, served to confirm his former experience as to its efficacy. He criticises adversely the treatment by tuberculin, and maintains that the simplicity of the remedy he advocates should be no bar to its more general employment. In this opinion no one will venture to differ with him.

Electricity Up to Date. By JOHN B. VERITY. London and New York: Frederick Warne & Co.—This little book deals in a popular and instructive way with the more practical problems of electric lighting and electric power. The author tells us in his preface that his object has been to write for the general public, and therefore with as much freedom from technicality as his subject would allow. Upon the whole he has succeeded, and succeeded well. Admirable features of his book are an excellently selected glossary and a carefully compiled index. His choice of subject is also marked by sound judgment, and his exposition is usually both clear and concise. Occasionally, however, he slips into inaccuracy or confusion. For example, on p. 50 he explains the danger from access of moisture to electric cables to be that the copper wires might become wet. Now, this would matter nothing whatever if the insulator remained intact. It is because a film of moisture connects the copper wire with the outer world that leakage takes place, and the absence of this suggestion from the passage in question makes what was no doubt as clear as day to the writer's mind almost unintelligible to the ordinary reader. But such shortcomings are only faults which a revising hand would easily remove or repair.

Bradshaw's Dictionary of Mineral Waters, Climatic Health Resorts, Sea Baths, and Hydropathic Establishments. With Maps and Plans. London: Kegan Paul, Trench, Trübner, and Co. 1892.—This is too good a book to be disfigured and have its usefulness impaired by misprints; but of these, we are sorry to say, there are not a few. Though professing to be revised up to 1892, the list of "specialists," which would be much better omitted, includes the name of Sir William Gull, who is no more; while Dr. Graily Hewitt will hardly recognise himself as "Dr. Hewitt Grail," or the well-known Florentine consultant in skin diseases as Dr. "Pellizari." The list of practitioners at the chief continental towns and healthy results is equally faulty, Drs. Aitken and Grigor, for example, being represented as now practising at Rome, though both of them have been dead these five years and more; while Dr. Spurway, who has taken the place of one of them in that capital, is referred to as still in practice at Pegli. Among the African health resorts why is the insanitary Tunis mentioned and the delightful Biskra, on the borders of the Sahara, ignored, the latter, moreover, being quite as well favoured in sulphur springs as the former, while infinitely superior to it in climatic steadiness, natural beauty, and repose? Montecatini, in Tuscany, has, we find, bad justice done to it in this edition, so far as its highly efficacious saline waters are concerned; but why restrict its medical staff to Dr. Paolo Casciani (whose name is also misspelt, by the way), and not include the eminent head of the establishment, Professor Federici, and his colleague Dr. Pio Fedeli? Amid blunders and defects such as these, what confidence has the reader that the temperatures of the several springs are correctly given or that the other indications are sufficiently accurate to spare him a fruitless and expensive journey? The book, we repeat, is distinctly meritorious in the main, but if it aspires to keep up its popularity it must for the future be less perfunctorily edited.

Epsom College Natural History Society. Report for the year ending Christmas, 1891.—The third number of this report recommends itself in a marked degree to favourable criticism. Compared with the attenuated nature of its two predecessors, its sudden growth to over a hundred pages appears very remarkable. But there is more than mere growth to note; there is internal evidence of healthy development, and this, again, affords the best testimony of real work. Although it is somewhat regrettable that no regular meetings were held in the geological or entomological sections of the Society during the midsummer term, they have not been entirely neglected. The lecture on the venomous snakes of India by Sir Joseph Fayrer is reproduced, and forms a highly interesting section. That on the wild animals of India by the same lecturer must also have afforded much satisfaction and instruction to the members of the Society. The reports of the various sections afford evidence of very useful work.

AN INFECTIOUS HOSPITAL, LEEDS.—The sanitary committee of the corporation has agreed (subject to a contract to be prepared to the satisfaction of the town clerk) to purchase the Manston Hall estate, situated in the York-road, for the sum of £10,000, for the purpose of erecting on the estate a hospital for infectious diseases. The property comprises upwards of ninety-seven acres and a mansion.

Analytical Records.

TOLPHITE.

(W. R. & H. V. DODD, 2, ST. ANDREW'S-PAVEMENT, STAMFORD-HILL.)

Qualitative analysis soon reveals the constituents which compose this nursery powder. It is perfectly free from all irritants, is antiseptic, carefully pulverised, and has a soft micaceous feel when rubbed between the fingers. All these are qualities which recommend it for the purpose for which it is intended.

BELLARA: AUSTRALIAN WINE.

(J. B. B. EARNSHAW & CO., SUFFOLK HOUSE, LAURENCE POUNTNEY-HILL, CANNON-STREET, E.C.)

It is now generally conceded that the wines exported from our big colony Australia are really of an excellent kind, and, though "cheap," are by no means "nasty." From the following analysis of Bellara claret, some idea of its composition may be gained: Alcohol, 8·85 per cent. by weight, 10·95 per cent. by volume; total solid matter 2·96 per cent., mineral matter 0·30 per cent. It is an agreeable light wine, free from excess of acid, and well suited for table use.

HALL'S COCA WINE.

(STEPHEN SMITH AND CO., BOW, E.)

This is an excellent wine, with an alcoholic strength equal to good port, possessing a similar flavour and bouquet, but associated with it also is the peculiar though pleasant aroma of the fresh coca leaf. Ether when shaken with the alkalised wine yielded a residue on evaporation which with hydrochloric acid gave characteristic crystals of cocaine hydrochlorate; they were further identified by the numbing effect produced by the crystals when rubbed on the tip of the tongue. Analysis gave the following data: Alcohol 16 per cent. by weight, 18·50 per cent. by volume; total solid matter 18·73 per cent. (sugar and coca principles), mineral matter 0·33 per cent. The restorative and invigorating properties of the coca leaf are now well known, and it may be very conveniently and palatably administered in the form of an agreeable wine such as that under examination, a wineglassful of which is stated to contain one drachm of the soluble active ingredients of the leaves.

PUREST CHLOROFORM.

(SALAMON AND CO., RAINHAM, ESSEX.)

No exception can be taken to the bold name of this product in view of the excellent results it furnished on examination. It distilled over almost to the last drop at 60° to 61° C., and left no residue. A trace of alcohol was detected by the exceedingly delicate iodoform test, and the specific gravity at 15·5° C. was accordingly found to be 1·4966. If the pharmacopœia tests for aldehyde, ketone, chlorine, and acidity are to be relied upon, none of these impurities are present. We have not examined a purer specimen.

NIEMANN'S CARNINE SYRUP.

(J. H. NIEMANN AND CO., AND R. F. MACLOSKEY, 12, MAJOR-STREET, MANCHESTER.)

To preserve the fresh juice of uncooked beef without sacrificing its specific qualities and without introducing antiseptics, the presence of which in a preparation destined for the most part for invalids is undesirable, has often proved a difficulty. Least objectionable of preservatives, and one hitherto unthought of apparently, is cane sugar. The above preparation is made by simply mixing sugar with the juice expressed by hydraulic pressure from raw meat. The result is literally a sweetmeat, nutritive, and palatable, and one that can be readily and agreeably taken in aerated water or milk. One fluid ounce of the syrup according to our experiments results, when boiled, in the coagulation of no less than eleven grains of solid albuminous principles. It contains also nitrogenous matters in a soluble and non-coagulable form. The preparation is a new and important addition to the list of valuable nutrients.

CORALLINE.

(THE CORALLINE MANUFACTURING COMPANY, E.C.)

Coralline, like many kindred preparations, is simply the flour of a certain cereal, moulded into attractive shapes by suitable treatment with steam, or other means. The microscope indicated at once the kind of starch of which it is largely composed. It is a cooked food, and will be found useful for the preparation of palatable diet for children.

PEARL-COATED PILLS AND LANADEPS.

(T. HOWARD, LLOYD, & CO., 86, HIGH-STREET, LEICESTER.)

Five specimens of pills, elegantly coated with a composition which in appearance resembles pearl, have been submitted to us by this firm. The coating gradually disintegrates in flakes even when placed in cold water, and the medicament is soon exposed in an excellent state of preservation, as was indicated by an analysis of the Blaud pill. Lanadeps is the name of a valuable ointment basis prepared from sheep's wool. It does not saponify readily with alkalies, is free from irritant fatty acids, and does not undergo an undesirable change on continued exposure. Lanadeps according to our experiments absorbs over half its weight of water. It is therefore admirably adapted as a vehicle for the external application of drugs like mercurials, iodoform, or potassium iodide.

HOLLANDS GENEVA (J. D. K. & Z.).

(JOHN DE KUYPER AND SONS, ROTTERDAM.)

A carefully distilled spirit, characterised by the peculiar flavour and smell which betoken the genuine Schiedam of Holland. Unlike most other spirits, hollands is practically free from solid matter and extractives, and on this account it may in some cases be advantageously substituted for the more popular whisky. The following analysis testifies in a measure to the unquestionable purity of this spirit: Alcohol, 42 per cent. by weight, 49·45 per cent. by volume—equal to 86·7 per cent. proof spirit; extractives, 0·032 per cent.; mineral matter, 0·015 per cent. Owing to the presence of a small quantity of essential oils, the spirit, on dilution with water, yields a slight opalescence, which is immediately cleared on the addition of ether.

GLYCERINUM PEPTICUM.

(BURROUGHS, WELLCOME, AND CO., SNOW-HILL BUILDINGS, E.C.)

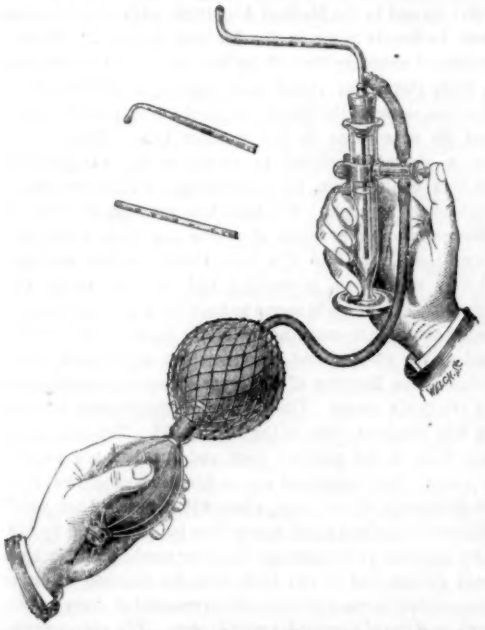
In our experiments this convenient preparation gave very satisfactory results. A few drops, for instance, diluted with very weak hydrochloric acid, rapidly digested a thin slice of hard-boiled white of egg, and in a short time dissolved it completely. The resulting solution gave the well-known biuret reaction for peptones. The preparation is simply a solution of pure pepsin in glycerine, and contains no objectionable antiseptics; it is trustworthy, and may be relied upon for uniformity of digestive power. The ease, also, with which it can be dispensed is clearly an advantage of some importance to practitioners.

New Inventions.

SPRAY PRODUCER, WITH CHECK ACTION FOR APPLYING MEDICAMENTS TO THE LARYNX &c.

THE merits of this instrument will be likely to be appreciated by those who have used the old form of spray, which allows a cloud of vapour to generate as soon as the bellows are worked, thus obstructing the surgeon's view. The instrument illustrated below allows the bellows to be fully charged with air, but does not set the spray working until the surgeon has focused the exact spot desired to be operated on; then, by touching the tap, he can start or

stop the spray instantly. Application by this means is rendered more effectual, and a nervous patient will be saved the discomfort arising from the hissing of the instrument before it is introduced into the mouth. Three tubes fit



each bottle as figured above. The apparatus is manufactured by Walters and Co, 29, Moorgate-street, London, E.C.

AN AUTOMETRIC STOPPER.

MESSRS. FLETCHER, FLETCHER, AND STEVENSON have submitted to us a simple and ingenious device by which the measurement of liquid medicaments is not only facilitated but made more accurate. It consists, as a glance at the accompanying sketch will probably explain, of a stopper made of pure unvulcanised rubber, in which is fitted a strong glass pipette graduated in five-minim divisions up to 120 minims. At the top of the pipette, just above the rubber cork, a rubber air-ball is attached, which, fitting closely to the perforated cork, gives the whole design the appearance of a common decanter stopper. On removing the stopper and attachment, and slightly compressing the ball, the required volume of liquid can be easily withdrawn, and then transferred to the bottle which is to contain the medicine. The "autometric stopper," as it is aptly called, is supplied with the 1 lb. bottles of this firm containing their "concentrated liquors."

SERGEANT'S VAPOUR INHALER.

THIS apparatus consists of a thin glass test-tube closed with a perforated cork, through which passes a small glass tube. To this can be attached a mouth-piece or a nose-piece. By its use volatile drugs, such as menthol and eucalyptus oil, can be brought into immediate contact with the throat and nasal passages in a heated state, by plunging the test-tube into some hot water and inhaling the medicament. It is manufactured by F. Ross Sergeant, Market-place, Nottingham.

INDEMNITY FOR CERTIFYING LUNATICS.

To the Editors of THE LANCET.

SIRS,—We are directed by the Council of the Medical Defence Union to lay before you the enclosed opinion of the legal advisers of the Union, which forms their reply to a question addressed to them as to the validity of a written indemnity obtained from the friends of a patient certified to be of unsound mind. It is thought that the information may be of general use to members of the profession.

We are, Sirs, your obedient servants,

LESLIE PHILLIPS, } Hon. Secs., Medical
A. G. BATEMAN, } Defence Union, Ltd.

Birmingham, March 29th, 1892.

Indemnity for Medical Certificate.

March 11, 1892.

DEAR SIR,—The provisions of Sec. 330 of the Lunacy Act, 1890, afford such ample protection that any attempt to extend them might be construed as an incentive to carelessness, if not worse, in the signing of medical certificates in lunacy. At the same time it is obvious that, notwithstanding the protection afforded by the section, a medical man, who, we suppose, receives but a small fee for certifying, might be put to a considerable amount of expense in defending himself against ill-founded proceedings.

We have, in accordance with your request, drafted a form of indemnity which we think is not open to objection on the ground of it being against public policy or otherwise. In case you should now or hereafter find it worth while to have printed forms of such an indemnity, we suggest that on the back of the indemnity a copy of Section 330 should be printed in accordance with the enclosed. JOHNSON & CO.

("I" or "We") hereby request you to sign a medical certificate that.....is a person of unsound mind, in accordance with your verbal report to ("me" or "us") to that effect, as the result of your examination of the said.....

And ("I" or "we, jointly and severally") hereby undertake to indemnify you against all liabilities, costs, and expenses, of what kind soever, to which you may be rendered liable, or which you may reasonably incur in consequence of any proceedings which may be threatened or instituted against you by reason of your having signed such a certificate, if in such proceedings it shall be admitted or proved that in so doing you acted in good faith and with reasonable care, in accordance with the provisions of the Lunacy Act, 1890 (53 Vict., c. 5), or such proceedings shall be discontinued or not proceeded with.

Dated this day of , 189 .

Witness to the signature of the said.....
Name.....
Address.....
Occupation.....

Name.....
Address.....

Section 330 of the Lunacy Act, 1890 (53 Vict., c. 5), is as follows:—

1. A person who before the passing of this Act has signed or carried out or done any act with a view to sign or carry out an order purporting to be a reception order or a medical certificate that a person is of unsound mind, and a person who after the passing of this Act presents a petition for any such order, or signs or carries out or does any act with a view to sign or carry out an order purporting to be a reception order, or any report or certificate purporting to be a report or certificate under this Act, or does anything in pursuance of this Act, shall not be liable to any civil or criminal proceedings, whether on the ground of want of jurisdiction or on any other ground, if such person has acted in good faith and with reasonable care.

2. If any proceedings are taken against any person for signing or carrying out or doing any act with a view to sign or carry out any such order, report, or certificate, or presenting any such petition as in the preceding subsection mentioned, or doing anything in pursuance of this Act, such proceedings may, upon summary application to the High Court or a judge thereof, be stayed upon such terms as to costs and otherwise as the court or judge may think fit, if the court or judge is satisfied that there is no reasonable ground for alleging want of good faith or reasonable care.

MANCHESTER HOSPITAL FOR CONSUMPTION.—The formal opening of the new out-patients' department of this institution took place on the 30th ult. The building is situated in Hardman-street, Deansgate, and is erected on a scale calculated to meet the increased work and requirements of the hospital.

THE LANCET.

LONDON: SATURDAY, APRIL 9, 1892.

THE appearance of the Registers of the profession—the Register of Medical Students, the Medical Register, and the Dentists' Register—is always an event of much interest to the profession. No medical library can be considered complete without the Medical Register, and the others are very convenient and instructive. We have already given in brief outline the data contained in these official lists, but we always feel moved by them to some reflections on the present position and growth of the profession. It might be thought, with the increasing number and severity of examinations, that the growth of the profession itself would be checked. Of this there is no immediate prospect, if we may judge from the additions both to the Register of Medical Students and to the official record of qualified medical men. Both lists in the present Registers show a marked increase over the preceding year. The addition to the number of students registering is very large, not to say alarming. Thus in 1890 there were registered 1846, but in 1891 no less than 2405. This means not only that 559 more persons were anxious to enter the profession in the latter year than in the former, but exhibits also a number very largely in excess of the increase in any previous year. Indeed, we must go back ten years for the next largest amount of registration of students. In 1881 there were 2171 registrations, but the number last year exceeds the record of ten years since by 234. We have before directed attention to the fact that the increase proceeds irregularly, being more one year and less another. But there has been no such leap in any previous year, and it implies such an excess of any numbers likely to be needed to fill the gaps in the profession that it would be satisfactory to find grounds for regarding it as merely temporary or due to some exceptional circumstance. We have already advanced an explanation. According to a recent recommendation of the General Medical Council, candidates commencing study after Jan. 1st, 1892, must not pass their final examination in medical surgery and midwifery before the close of the fifth year of medical study. In other words, the students on the Medical Register now issued are registered just in time to escape the requirement of a fifth year, and this possibly may have caused the rush. It is somewhat curious to note that the chief increase in registrations of students is in England, where the excess over the previous years is 334. It is next greatest in Ireland (139), and in Scotland it is only 86. Perhaps the prospect of a teaching university in London may have had something to do in determining the large increase in the number of English registrations of students.

Returning to the Medical Register, we may again be excused a word of regret at its (no doubt unavoidable) late appearance, so that a quarter of the year is gone before this official roll is in the hands of the profession or of the Courts. Next we may notice one significant omission from this Register as compared with its predecessors—that of a table, headed in the previous year: "Table G., showing the several Registrable Qualifications, on and after 'the appointed day' (June 30th, 1887), named in the Medical Act (1886), with abbreviations used to denote them in the Medical Register." It is a matter of notoriety that at the last meeting of the Council a little storm was raised over the registrability of the diploma, *per se*, of the Royal College of Physicians of London, and its appearance in this familiar table. The Council by a majority refused to recognise the completeness of this qualification, and instructed its registrar not to register it as such. We have not yet seen the end of this question, the venue of which has been transferred from the Council to the Law Courts, where we may shortly expect an interesting and perhaps costly discussion. Meantime it seems to have been thought that the safest course is to omit the table. In spite of this omission and of the smaller and more compact appearance of the volume, the Register of this year exceeds its predecessor by thirty-six pages. The number of practitioners is larger in this Register than in the last by 392. This addition is less than in the previous year, and less than the average of years. The increase of course fluctuates much, but it is, on an average of ten years, about 618 a year. Last year's Register contained more names than its predecessor by 818. The increase in the present Register would probably have been greater had it not been that the election of direct representatives no doubt caused the removal of many names, such as those of deceased practitioners. The quinquennial election of direct representatives affords a reasonable occasion for comparison of numbers. In 1886 the Register contained 26,452 names; in 1891 it contained 29,555, or an increase in five years of 3103 practitioners.

The removals from the Register are not the least interesting part of the information given in these volumes. Happily there are very few under the penal clauses of the Medical Acts. In the last year they reached five, a number only once previously reached. These, however, are five too many. But the fault does not rest with the Medical Council. Under Clause 14, which empowers the Registrar to remove the names of those of whose existence or residence he has reason to be doubtful, owing to no replies to inquiries being returned, 407 were removed. The number removed on evidence of death, strange to say, does not materially increase. Rather it seems to diminish. For though last year it was 581, as compared with 467 in the previous year, the average has been only 529 in the last five years, compared with 570 in the last fifteen years. It is well known that the Registrar uses every means of getting evidence of the deaths of practitioners, but it is to be feared that many are still unreported to him. Even so it is gratifying to believe that the mortality of the profession is decreasing rather than otherwise. Let us hope that medical men, while increasingly solicitous about the lives of their patients, are also more considerate of their own. The Colonial Register has grown, now comprising ten instead of two names, and all the qualifications are Australian. We cannot leave this volume without testifying to the care with which it seems to have been prepared, and to the value of its tables, Acts of Parliament, and other contents.

We have already given the principal facts of the Dentists' Register, and noted the increasing proportion of those whose names are thereon enrolled in virtue of diplomas implying professional education and justifying us in looking annually more and more for professional methods of practice.

WE are in possession of abundance of facts which prove only too clearly that our herds are decimated by a deadly scourge, more damaging by far than contagious pleuro-pneumonia, foot-and-mouth disease, or any other disorder with which we are acquainted; that the milk of the affected animals will readily produce the malady in other creatures consuming these articles; that the disease is highly contagious between individuals of the bovine species; and that the inference is exceedingly strong that human beings are exposed to great danger by the existence of such a disorder among cattle. That the disease is very infectious in the bovine species has been well known to veterinarians for at least a century; that it is readily transmissible, experimentally, by inoculation and by ingestion of the products of diseased beasts has been clearly demonstrated hundreds of times since VILLEMIN published his researches a quarter of a century ago; that it can be communicated accidentally not only to bovines, but to animals of various species, has been shown in the records of numerous cases in medical and veterinary works and periodicals; and that it may be transmitted from animals to man there are several instances to prove. Unfortunately, we cannot experimentally demonstrate that mankind can take tuberculosis from cattle by eating the flesh, drinking the milk, or partaking of the cheese or butter derived from stricken animals, unless it were permissible and right to test the matter on persons condemned to be executed; but there is clinical and experimental evidence to offer that such transmission is possible—nay, highly probable; and there is only too much reason to apprehend that infants and young people incur serious risks from being allowed to consume the milk of cattle which are tuberculous. All this is well known, and for practical purposes is sufficient to warrant steps being taken to grapple with a plague that is terribly common among our live stock, is increasing yearly, and bids fair to destroy it eventually unless vigorous measures are instituted. Surely this alone should long ago have led to sanitary measures being devised and enforced; for though human life is, legislatively, held to be of less value than that of animals, the grave losses inflicted by the presence of bovine tuberculosis in our dairies and in our choice breeds of cattle ought to be sufficient to arouse attention and instigate the adoption of sanitary police measures to limit its ravages. Of the wide and serious prevalence of the malady in cattle there can be no doubt. Perhaps if human health and life had not been at stake the scourge would have been taken in hand long ago; otherwise why should contagious pleuro-pneumonia and foot-and-mouth disease, which are not nearly so destructive or prevalent, be so demonstratively and resolutely dealt with?

It is a mistake to suppose that the existence of tuberculosis cannot be diagnosed in cattle. Every experienced veterinary surgeon can tell at a glance animals which are badly affected—indeed, butchers and dairymen know them well, and indicate them by familiar names. There may be cases which are obscure, but these are comparatively few, we presume, and are not nearly so perilous for the public safety as the cases of those animals known as "piners" or "wasters," or whose udders are involved. Besides, in doubtful cases the veterinary surgeon has his clinical thermometer, and can also have recourse to the tuberculin test, which the highest authorities assert is of positive value as an aid in diagnosis.

With the evidence before us, we must express the opinion, and strongly, that the time has long since arrived when something should be done to stay the course of a disorder that seriously damages property and is a source of great danger to the public health. The malady is not even recognised in the Contagious Diseases (Animals) Act. It is something more than disgraceful that such a pest should be allowed to revel among and destroy our cattle unhindered and unchecked, and that the flesh and milk of these creatures should be dealt out as food without warning and without restriction. With a cause of damage and disease—human and animal—so palpable everywhere, we cannot consider ourselves a very enlightened or humane people if we longer allow it to continue its operations when the steps to be adopted are so apparent and so simple.

THE loose writing and looser thinking characteristic of so much of our popular literature have been well exposed in Professor MASSON'S "Story of Gifford and Keats," in the April number of the *Nineteenth Century*. For nearly seventy years it has been accepted as true in fact that the author of "Endymion" was brought to a premature grave by a severe article in the *Quarterly*, attributed (without authority, it would seem) to its editor, Dr. WILLIAM GIFFORD. The creator of this myth was the young poet's friend, SHELLEY—himself the object of adverse criticism in the same journal,—according to whom the article in question "produced the most violent effect on his susceptible mind; the agitation thus originated ended in a rupture of a blood-vessel in the lungs, and a rapid consumption ensued." SHELLEY, we need not say, was quite without scientific training or scientific faculty; but had he possessed even the scanty initiation enjoyed by KEATS himself in medical study, he would have paused before thus lightly improvising and publishing a more than questionable account of the cause of his friend's death. He asks us to believe that the sense of wrong aroused in KEATS by a scornful depreciation of his first essay in poetry originated a mental "agitation" which "ended in a rupture of a bloodvessel in the lungs," of which the sequela was "a rapid consumption." What medical undergraduate would accept this as a rational or probable history of a pulmonary hæmorrhage? or, even admitting it to be such, would see in the said hæmorrhage the immediate cause of a "rapid consumption?" Phthisis ab hæmoptoë is so rare, or so imperfectly established, that many pathologists refuse it a place in the classification of disease. The hæmoptysis of phthisis (grave enough as a symptom in the early stage, but seldom if ever fatal) is an indication of pre-existing structural lesion, most commonly of tuberculous deposit; and it is simply an inversion of antecedent and consequent to make a rapid consumption "ensue" upon it. But what in KEATS'S case are the

facts? As Professor MASSON shows, he accepted the adverse criticism calmly, like the high-souled fellow he was—without anything of the "agitation" sufficient to cause a pulmonary apoplexy. "Praise or blame," he writes, "has but a momentary effect on the man whose love of beauty in the abstract makes him a severe critic of his own work." Again, phthisis, as Professor MASSON duly notes, was hereditary in the family of KEATS, whose younger brother TOM died of it, after being watched by the poet, sitting by his bedside night and day for months. Furthermore, KEATS went through this trying experience after a tour in the Scottish Highlands had, by the privation and exposure attending it, evolved the latent seeds of the constitutional cachexia, shown by the recurring follicular disease of the pharynx he brought back with him. Yet again, in this ominous condition we find him working at his favourite pursuits with greater ardour and intensity than ever, while suffering from what Lord BEACONSFIELD has called "that ignoble melancholy which arises from pecuniary embarrassment." These and other influences, all of them far more adverse to the phthisically constituted poet than the heavy comedy of his critics, Professor MASSON brings before us, with the object and, let us add, with the effect of destroying for ever the hypothesis of SHELLEY that his friend owed his death to the "canker-worms" of contemporary criticism. "The Story of Gifford and Keats" is of value, far beyond its immediate purpose, as illustrating for us the mythopœic element in literature and as running to earth one of its most characteristic and popularly accepted examples. Other contributors to the *Nineteenth Century* might profit by Professor MASSON'S memoir, notably the amiable and accomplished authoress of a paper on "Vegetable Diet," in which, among other feats of what we have called "ecstatic etiology," we find the consumption of animal food from overdriven and maltreated oxen and sheep gravely suggested as the cause of "the excessive and inexplicable extension of cancer within the last decade!"

Annotations.

"Ne quid nimis."

ROYAL COLLEGE OF PHYSICIANS.

ON Monday next, pursuant to Act of Parliament, the Fellows of the Royal College of Physicians will have to elect a President for the ensuing year. Sir Andrew Clark has so efficiently served the College in the past that there can be little doubt about his re-election. He has thrown himself thoroughly into the work of the College, and his tenure of office has been remarkable both for the variety and importance of the subjects brought under discussion, and for the ability with which, as President, he has mastered the details and aided the decisions of the College. In all probability the meeting on Monday will to a certain extent indicate the possible outcome of future elections; such indications, however, are to be regarded merely as friendly signs of the times. At the present moment the College has assumed a very definite position in relation to sundry important questions which have not yet reached their final stage; hence the re-election of Sir Andrew Clark becomes not merely a kindly recognition of his invaluable services, but also a matter of the highest expediency in the interests of the College.

PUBLICANS AND DRUNKENNESS.

IT would seem that among the agents in preventing the tragedies of drunkenness in this country we are to look to the publicans themselves. One of the judges lately—Mr. Justice Grantham, at the Durham Assizes—in sentencing a pitman for manslaughter of a brother pitman, ordered the publican who had supplied them both with drink to stand in the dock. Thereupon the judge reflected on him severely for giving drink to drunken men, to men whom he harboured in his house on pay-day sometimes from midday till the house closed, and at other times from 5 o'clock till the house closed. Not only had he done it in this unhappy case, but the judge declared it had been his practice, and he feared it was the practice of other publicans, to serve men habitually when they were drunk. Such a warning to publicans ought to be a caution. The judge commended to the justices present the telling-off of a special body of police to go about before closing time, visit the houses, and see that drink was not being served to people already under its influence. This does seem one way of getting something like satisfactory police accounts of the drunkenness that is now altogether unchecked and unreported, and of diminishing the disproportion between the numbers of persons found guilty of offences committed under drink and the number of publicans found guilty of supplying drunken persons with drink. In Pennsylvania there is a law making saloon-keepers responsible in damages for injuries resulting from the sale of liquors to intoxicated persons. A recent decision in the Courts there gave substantial damages to a widow whose husband was unable to guide his steps home, fell into a gutter, contracted pneumonia, and died. The publican was held responsible for the pneumonia.

THE STATE REGULATION OF WORKING HOURS.

THE evidence recently tendered before parliamentary committees appointed to deal with the question of hours of labour leaves no room for doubt that these are at the present time excessive. According to one witness, Mr. J. B. Lakeman, inspector of factories and workshops, the working time of women in the metropolitan districts under his supervision varies from eighty to ninety hours per week, a daily average of about twelve hours; and these, as he pertinently remarks, are very commonly spent amid insanitary conditions. The obvious remedy is, of course, to shorten the daily term of active duty, which constitutes the chief occasion of error and the clue to other associated evils. Another suggestion by the same witness is as simple as it is sensible—namely, the allowance of a definite and sufficient time for two daily meals. It is clear that nothing is more conducive to effective work than comfort and regularity where these are concerned. The great advantage of a really pure atmosphere is hardly to be found in a large city, but the reduction of work hours implies at least a relative reduction in the amount of inhaled impurities due to gas combustion. On every sanitary ground, therefore, we would urge the great importance of the proposed new Act for regulating the hours of female labour in shops. The chief obstacle to this measure, it is well known, does not consist in any implied inconvenience to belated customers or to the course of business, but in the competitive keenness which leads a poorer class of traders to labour and make labour at all unseasonable times. Were a work limit assigned and

made compulsory, the great mass of tradesmen would gladly avail themselves of the relief thus afforded, and trade itself would flourish none the less because controlled by the time restrictions imposed by obvious necessity. Some decisive step in this direction is everywhere suggested, in the interest of men as well as women, by the physical signs of over-pressure visible among almost all classes of operatives. Certainly the term proposed, seventy-four hours per week, ought to suffice for all ordinary claims of business. The question of inspection, as we have all along maintained, must form an important feature in any scheme of regulation, and this matter, we are pleased to note, has come under the consideration of the Committee on Shop Hours. Similar in its main purpose, and of equal if not greater public importance with the inquiry above mentioned, is the investigation into the hours of railway servants which is now engaging the attention of another parliamentary committee. It is worth noting that even the assertions of superior officials cannot always exonerate railway companies from the blame so often attributed to them in respect of this matter. In the case of a fireman lately dismissed on one of the Irish lines, the misdemeanour alleged to be attributed to him consisted in his refusal, after working twenty-three hours, to undertake duty for a further term of sixteen hours. The same man was said to have been employed in one week for 117 hours. His case was no doubt exceptional, but it can hardly be accepted as unique. It certainly suggests very strongly the need of legislative regulation, as much for the sake of public safety as of ordinary justice to individual workmen.

MR. HUXLEY AND THE TITLE OF DOCTOR.

MR. HUXLEY, it seems, though M.D. of Breslau and M.B. of the University of London, and the happy possessor of endless doctorates of all sorts, objects to the title of "Dr." Huxley. He can stand being called Professor, but draws the line at "Dr.," which many men seem to value so highly. Mr. Freeman and Matthew Arnold, we are told, objected to be called "Professor." It is all intelligible enough. Great men have a consciousness of something *in* them that supersedes all the aid and adornment that titles can give. "When unadorned, adorned the most." And in this they are a warning, if not an example, to lesser men who attach an excessive importance to the mere embellishments of a name.

FRENCH WORKMEN AND SANITATION.

THE Workmen's Congress of Hygiene, to which we have already alluded, promises to be a great success. Distinguished professors and physicians of Paris have promised assistance. The organisers—the National Committee of the French Labour Party—have secured the handsome hall of L'Union du Commerce et de l'Industrie, in the Rue de Lancry, for every Saturday evening during the next six weeks. Here preparatory lectures will be addressed to the working men who have joined the Congress. The public will be admitted to the gallery on the payment of a small fee. The first lecture will be delivered on Saturday, April 9th, by Dr. Dujardin-Beaumetz, Member of the Council of Hygiene of the Department of the Seine (the Paris district), on Alimentation and the Alimentary Regimen. On April 16th Dr. Armand Gautier, Member of the Institute, Professor of Chemistry at the Paris Faculty of Medicine, will lecture on Food Substances of first necessity, their Character, and their Defects. This is expected to be an extremely interesting lecture, for it is well known that Dr. Gautier holds very strong views in respect to the making of bread, and regards modern methods as being dangerous, wasteful, and extravagant. On April 22nd, Dr. Budin, Professor of the Paris Faculty, will lecture on the Hygiene of the Children of the Working Class, Milk-supply, and Crèches. On April 30th Dr. Dumesnil, Secretary of the Consultative Committee of France, Member of the Commission on Insalubrious Dwellings, will discourse on the Sanitation of the Workman's Home. On May 7th Dr. H. Napias, Member of the Consultative Committee of Hygiene of France, Inspector of Factories, and General Secretary of the Society of Public Medicine and Professional Hygiene, will lecture on the Hygiene of Labour—workshops, factories, offices, and retail shops. Finally, on May 14th, Dr. A. J. Martin, Member of the Consultative Committee of Hygiene of France, Professor of Hygiene, will deliver an address on Preventable Diseases, and how to Prevent them. Almost as instructive and useful as these lectures are the excursions and practical studies which are to be made each Sunday following the lectures. The members of the Congress are to be conducted, for instance, to the Paris Municipal Laboratory, where bread, wine, and other such substances will be analysed in their presence, and they will be shown how adulteration is detected. The sewers will be visited and plumbing apparatus examined—in fact hygiene will be studied theoretically by means of the lectures, practically by excursions and visits which the authorities of the town will facilitate in every way within their power. It is only after these six weeks of preparatory investigation that, towards the end of the month of May, the Congress will hold its sitting. The debates, we have already stated, will be limited exclusively to three phases of hygiene: the workman's food, work, and home. The delegates will, by the preparatory measures we have described, have acquired some knowledge of the technicalities of the subjects they are about to discuss; and it will be interesting to hear what the workmen themselves have to say concerning the questions affecting especially the health of their own class.

SMALL-POX AND ISOLATION IN DEWSBURY.

IT had been hoped that the great difficulties which had been felt by many of the sanitary authorities in the Dewsbury Union during the serious prevalence of small-pox would have led to the early provision of some means of isolation which, quite apart from the question of small-pox, would have been available for infectious diseases generally. Batley, indeed, took the lead in the matter, and the Local Government Board, having held a local inquiry, undertook to favour the formation of a joint hospital district and board, and practically promised the applying authorities to aid in its being assented to by Parliament this session. For this purpose a draft order was, indeed, actually issued. At this stage the town of Dewsbury stepped in, and, having called a meeting of a number of the authorities concerned, has secured their provisional agreement to abandon Batley and to join them in the constitution of a different joint board; and the Dewsbury chairman, who presided, naïvely got over the serious delay which the new action necessitates by telling the delegates that the Local Government Board are so fully engaged with Bills this session that it will be impossible for the present for them to do anything in the matter. In the meantime it is announced in the local press that the small-pox epidemic proceeds with a persistency that is truly alarming in this district, which is identified with the manufacture of heavy woollen goods. Fresh attacks are heard of from Dewsbury, Heckmondwike, Birstal, Ravensthorpe, Thornhill, and Soothill-Upper. Dewsbury had last week no less than forty-four acute cases under isolation, to say nothing of thirty-six convalescents. And whilst this is going on incorrect statements are being made as to the vaccination or otherwise of nurses attacked. Thus a statement has been propagated to the effect that a nurse who has been a sufferer had been recently vaccinated. But on the authority

of the secretary to the Dewsbury District and General Infirmary, this is not only denied, but it is stated that this nurse and another official are the only officials who had not been recently vaccinated. This case gives support to the very general impression which has prevailed, to the effect that much good would arise from an independent investigation into the relation of vaccination to an actually existing epidemic of small-pox, such as that which is going on in and about Dewsbury; and we are therefore glad that the members of the Royal Commission on Vaccination have obtained the services of Dr. Sidney Coupland for this purpose. Dr. Coupland, who is an able pathologist as well as a discriminating physician, will bring an unbiased mind to the subject he has undertaken to investigate, and whatever the lessons which his labours may have to teach, they will merit and receive attentive consideration. He is already on the spot, and he purposes to proceed continuously with his inquiry.

A HOSPITAL AT MASSOWAH.

ITALY has great opportunities on the Red Sea littoral, but she lacks the money to turn them to immediate account. One of these is the construction of a sanatorium on the Asmara table-land—a delightfully salubrious hill country, which might be made accessible from Massowah by rail in a couple of hours. But beyond "prospecting" it as summer quarters for her seaport garrison she has taken no steps to utilise the magnificent Asmara site, on which British or American enterprise would have run up an attractive health resort long ago, making it a *succursale* to Massowah, at which passengers to and from the East Indies or the Straits might conveniently break the journey. Italy has, however, made a beginning at Massowah itself, and from the *Eritreo*, the local organ of Italian policy, we learn that she has started a hospital, primarily for the behoof of the settlement, but ultimately to be extended and made available for a larger public. The hospital enjoys the patronage of His Majesty King Humbert, after whom it is called, and whose subvention of 5000 lire (£200) attests his interest in it as more than nominal. There are many reasons why Italy should strengthen her foothold in those parts—the adaptability of her settlers to the climate, as already shown in THE LANCET, giving her an advantage over other European competitors in the opening up of the Dark Continent. More than fifty years ago the Capuchin missionary Massaia did noble work to the west of Abyssinia, and surely his initiative might be followed up over the interval between that point and the Red Sea.

THE THERAPEUTIC EMPLOYMENT OF ANTI-TOXINES.

IN the *Medical News* (New York) of March 19th there is an interesting summary of the efforts that have been made to apply therapeutically, in the management of disease in human beings, the results of recent studies upon the chemical products of bacteria, and the substances obtained from the bodies of patients who had died from the disease which these organisms produce. Most prominent among these studies were the results obtained by Behring and Kitasato in their work upon tetanus. Their investigations are well known. They showed that in certain animals which were susceptible to this disease it was possible to produce a condition of immunity against the inroads of the organism that causes it, and that when immunity was once established, the blood serum of the protected animal possessed the property not only of affording immunity to other susceptible animals, but a more or less curative effect when the disease was already in progress. They also further demonstrated that the blood and serum of animals that had been rendered immune against tetanus possessed the power of rendering inert the bacilli that play the etiological *rôle* in the production of this malady. The practical application of this observation to the therapeutics of tetanus was first made by Tizzoni and Centanni, who isolated fro mthe serum of animals rendered immune the anti-tetanus principle, and Tizzoni claims to have employed it with successful results in the treatment of tetanus in the human being. Schwarz, assistant in the surgical clinic at Padua, also reports the successful treatment of a case of traumatic tetanus in the human being by the use of the tetanus anti-toxine of Tizzoni and Centanni. Another case of recovery after this method of treatment is also reported by Schwarz as having occurred in Toscana under the management of Dr. Pacini, and still another is recorded from the surgical clinic of Professor Nicoladoni in Innsbruck. In a similar line the experiments of the Klemperers in connexion with croupous pneumonia must be looked upon as a triumph of bacteriology, even though they are as yet by no means completed. These observers succeeded not only in rendering susceptible animals immune against the form of septicæmia produced by the organism that is believed to be the cause of croupous pneumonia, but also demonstrated that the serum of these animals had the power of affording both immunity against the disease when injected into other animals and of bringing about a cure when injected into animals in which the disease was already in progress. They then directed their attention to the treatment of the disease by this means in human beings, and found that by the subcutaneous injection of the serum of animals rendered immune, the patients suffering from croupous pneumonia, the results were in the main promising. They demonstrated that while healthy individuals and those suffering from other forms of disease presented no systemic reaction after the injection of the serum, in six cases of pneumonia in which the serum was employed there was a marked fall of temperature and slowing of the pulse within the first twelve hours after it was injected. In four of these cases the temperature fell to normal, but rose again after six hours; in the remaining two it fell to normal, and remained there.

PRACTICE IN SOUTH AMERICA.

As Argentina has sometimes been described as a sort of El Dorado for medical men on account of the high fees which at times have been undoubtedly charged and obtained from wealthy merchants residing in Buenos Ayres, and as the conditions of practice at present are very far from justifying such a description, a correspondent of a well-known German medical journal has recently endeavoured to warn any of his countrymen who think of emigrating against any very elevated conception of the state of matters medical in that part of the world. No foreign diploma is recognised as entitling to practice; but an examination, both practical and theoretical, must be passed in one of the two universities, and this is conducted in Spanish, so that the first requisite is a residence of several months in the country in order to learn the language. In Buenos Ayres the examination lasts quite a month, and includes mental and children's diseases, ophthalmology, and toxicology. The fee is 350 dollars, paper currency, which at present corresponds to about twenty guineas. In Cordova, the other university, the examination is more simple, but the fees are considerably higher. Leave can be obtained, without passing the examination, to practise in localities where there is no doctor, but this has to be renewed every six months, and is refused if a man with a recognised diploma makes his appearance on the scene. Of the 450,000 inhabitants of Buenos Ayres about one-half are foreigners, 15,000 being Germans, and there are already fourteen German practitioners. Since the revolution and the consequent depreciation of the currency the fees have fallen to about the same

as in continental capitals, but the expense of living is far greater. In Monte Video a similar Spanish examination is requisite. In Paraguay there is a simple oral examination. In Brazil the examination may be passed in French, and is not so serious an affair as in Buenos Ayres.

THE DYNAMITE EXPLOSIONS IN PARIS.

THE attempt to blow up some private and public buildings in Paris suggests the inquiry as to what means exist for the succour of the wounded. Fortunately, so far, the number of the wounded is limited, but that is due to accident, and not to the nature of the explosives used. The Paris police are not renowned for their urbanity. The men are recruited from anything but the best sources; they are badly paid, and, when overworked by any political crisis, are apt to become callous and brutal. The other day, when the explosion took place at the house in the Boulevard Saint Germain, one of the principal contributors to the *Progrès Médical* and the director of the hospital La Pitié were in a café close at hand. They immediately rushed to the spot, explained who they were, offered to telephone for ambulances, and to dress the wounds of such persons as might have been hurt by the explosion. The police, however, without even inquiring whether there were any wounded requiring assistance, roughly pushed these medical men aside and rudely sent them away. On the other hand, the police are themselves incompetent to render assistance to the wounded. Many efforts have been made to give instruction to police officers similar to that imparted by the St. John Ambulance Association in England. For some reason as yet not satisfactorily explained these offers have not found favour in the eyes of the authorities. It is said "it is an evil wind that blows no one any good." The anarchist plots will have one not unsatisfactory result if, as is probable, they lead to the better instruction of the police in respect of the care necessary for the succour and removal of the wounded. It is now very generally felt that a larger number to police is required in Paris, that the men must be more carefully recruited, and that it would be a great advantage if at least some among them were trained in ambulance work.

DEATH UNDER CHLOROFORM.

A DEATH occurred on Wednesday, March 23rd, in the practice of a London hospital surgeon, the chloroform having been administered by an anæsthetist of great experience and skill. We have frequently pointed out that these occurrences, sad as they are, must in the present day be to a certain extent inevitable, and will happen even in the hands of the most skilled. It would be as unreasonable to raise the panic cry about chloroform as to refuse to permit any surgical operation to be performed or medical treatment to be adopted because a percentage of deaths is associated with such proceedings. On the other hand, we safeguard our patients by using every precaution against mishap in medicine and surgery, and we draw largely upon the stores of our past experience in deciding whether or not any given operation should be performed in any given case. So should it be with our anæsthetics. It certainly appeals to the sense of the fitness of things that only those who have an extensive experience in the use of anæsthetics should be entrusted with their use, and that each case should be as thoroughly studied from the point of view of the person giving the anæsthetic as from that of the surgeon. The expert has several problems to work out in dealing with any case: he must decide whether an anæsthetic can be taken, what anæsthetic is best suited to the exigencies of the patient, the surgeon, and the operation, and then he has to conduct the anæsthesia in the best and safest possible manner, having in view not only the welfare of the patient, but also the requirements of the proposed surgical manipulation. In the case the particulars of which we have to chronicle below everything was done which could have been prompted by human forethought. The patient, a boy of six, deformed, and somewhat delicate, was chloroformed by an expert with his usual care, and the operation of staphyloraphy was successfully performed. The head was placed in the fully extended posture. The breathing became indistinct just as the operation was completed and the heart failed. Artificial respiration, performed for an hour, failed to resuscitate the boy. The child had successfully gone through several operations before this one. The necropsy, beyond revealing a somewhat small and flabby heart, gave no clue to the cause of death. Although Mr. Warrington Haward and Mr. Pollock, when they urged the value of ether before the Medico-Chirurgical Society, spoke in approval of ether in cleft palate operations, yet the general consensus of opinion on the part of the profession has for years been to favour the employment of chloroform for staphyloraphy as being much more convenient and less likely to interfere with its accurate performance. We must feel deep regret for the death and sympathy with all concerned, but there certainly seems the consolation of knowing that the fatality was, humanly speaking, unavoidable.

"ADDING A NEW TERROR TO DEATH."

IT is not often we find ourselves in some accord with Miss Frances Power Cobbe. But for once we have that pleasure. She has published a leaflet headed "Adding a New Terror to Death," in which she describes and denounces the too common practice of advertising the symptoms of the illness and sometimes the details of the treatment of any patient whose position in the social or political system is at all important. She says that "death-beds are desecrated that doctors may be advertised." There is perhaps a dash of her own animus against the profession in this sentence, but she undoubtedly has hit on a tendency which requires repression. The medical profession is essentially a quiet one, dealing with private and personal facts, the divulgence of which is unseemly. Even in the case where the most important lives are at stake the medical facts are the affair of the patient and his family alone. This is now much better understood than it was a few years ago, but there is enough truth in the satire of Miss Cobbe to justify our giving it this notice.

THE MICROBE AMONGST THE BATAKS.

ALTHOUGH it has long been accepted that there is nothing new under the sun, we usually look for our anticipators in China, where we are specially referred to Confucius. In the *Asiatic Quarterly Review* for January, however, we are referred by "L. B." to M. J. Claine's description of a Sumatra manuscript on the Microbe. Most of these manuscripts are composed of the inner bark of a certain tree cut into long slips and folded in sections. According to Mr. W. Marsden, F.R.S., who writes in 1811, "their contents are little known to us. The writing of most of those in my possession is mixed with uncouth representations of scolopendra and other noxious animals, and frequent diagrams, which imply their being works of astrology and divination." M. Claine has been fortunate enough to obtain one of these manuscripts containing an account of some plague, and from the drawings given he maintains "that the Batak physicians, two centuries ago, had anticipated the modern theory of germs and bacilli." It is interesting to note that this would be shortly after the earliest observations on this subject had been made in Germany, and especially in Holland,

by Kircher, Lange, and Leeuwenhoek. The Bataks were an educated people, many of them being able to read and write, and although they probably obtained much of their information from the Hindoos who ascribe diseases to a Kira or worm, it is quite probable that their ideas on the subject of microbes may have been derived from other quarters. In the next number of this quarterly we are promised a translation of some of this Batak manuscript. The illustration produced in the number before us shows a series of lines, spirals, and circles which may be interpreted to represent bacilli, micrococci, and spirilla, leptothrix forms, and the rest; but along with these, and often, as it were, built up of them, are forms which might be meant to indicate insects &c. We shall look forward with considerable interest to the translation of this manuscript.

RECOGNITION OF POOR-LAW EXTRA MEDICAL WORK.

THE extra work of Poor-law medical officers during the influenza season is little heard of, but can well be imagined. It is gratifying to notice in different parts of the country a disposition on the part of boards of guardians to do their duty to such officers. The *Surrey Advertiser* contains the report of a meeting of the Hambledon board of guardians, at which a proposal to offer a bonus of 15 per cent. on their salaries to the medical officers was discussed, and in the end carried *nem. con.* A reverend gentleman tried hard to wreck the resolution on the ground that he saw no reason for such a proposal. The medical men took the office for better or for worse, and they were there as guardians of the poor, not of the medical officers! This gentleman must not be too hardly censured. He is evidently defective in his sense of the reasonableness of things; as if the guardians were not there to do justice to their medical officers, and as if they could better protect the poor than by properly rewarding the medical officers, who had saved the lives of the poor at the risk of their own. We hope the excellent example of the Hambledon guardians will be followed everywhere.

THE PROGRESS OF SANITATION IN INDIA.

WE are glad to learn from the *Pioneer Mail* of the 17th ult. that a Bill was introduced at a recent meeting of the Provincial Legislative Council for the North-Western Provinces and Oudh, dealing with the construction and maintenance of drainage and sewerage works in municipalities. It is certainly necessary that something should be done in this direction, for it seems to be urgently needed, if we may judge from the report of the sanitary commissioner for 1890. That year was a very unhealthy one in the North-Western Provinces and Oudh. The death-rate was higher than it has been since 1879, when it reached 44·8 per 1000. It equalled 37·27 per 1000 in 1890, when there was a marked prevalence of fevers, the registered number of deaths from which reached an enormous total, and attained a ratio of 28·21 per 1000. Fever is often used in India, no doubt, as a convenient label to apply to a number of febrile diseases other than those of malarial origin. Influenza appears to have prevailed as an epidemic, and added its quota to the fever death-rate of 1890. Cholera and small-pox also prevailed to a great extent. The great increase of rainfall over the average, and the increased price of food—owing to the large export of grain to Europe rather than to any bad harvest—no doubt contributed greatly as general causes to the large sickness and mortality. But the drainage, water-supply, and conservancy arrangements are, generally speaking, in an extremely unsatisfactory condition. The present Bill originated with the case of Benares, which was the first of the kind for practical treatment in these provinces. The provision of good water is the great need, but drainage and sewerage are urgently required. The Bill is a general measure, capable of being adapted to different towns with differing and sometimes widely varying conditions. It is largely based on the provisions of the Bombay Municipal Act. The nine chapters of the Bill deal with definitions, with the construction of drainage and sewerage works, the drainage of premises, the enforcement of privy accommodation, the levy of a sewerage rate, and the provision of by-laws, &c. The Bill has, we are assured, been very carefully drawn, in view of the admitted needs of certain municipalities in these provinces, and is believed to offer a fair and sufficient basis for preliminary discussion.

LEUCOCYTOSIS IN PNEUMONIA.

DR. R. VON JAKSCH, in the *Centralbl. für Klin. Med.*, draws attention to the fact that the prognosis in cases of croupous pneumonia in which leucocytosis does not appear is very unfavourable. He thinks that in these instances it would be advisable to give by the mouth or hypodermically either pilocarpine, antipyrine, or nuclein, all of which, according to Horbaczewski, increase the number of white blood-corpuscles. Dr. von Jaksch is fully convinced that pilocarpine in croupous pneumonia actually increases the number of white corpuscles when a condition of leucocytosis already exists. For instance, in a patient suffering from pneumonia of the right base the number of white corpuscles was increased 62·7 per cent. an hour after the hypodermic injection of 0·005 milligramme of hydrochlorate of pilocarpine. This sudden increase was not due to the ingestion of food, as the patient during the time was kept without nourishment.

THE ISLINGTON MEDICAL OFFICERSHIP OF HEALTH.

IT is gratifying to know that the responsibility of the action of the Islington Vestry in disregarding its own by-law, and making an appointment to the officership of health without even advertising the vacancy, is left with the vestry alone. The procedure is denounced on all hands. The leading Islington papers declare it to be without justification and without precedent. We understand, too, that a dignified protest has been forwarded to the vestry, signed by most of the leading practitioners in Islington. One of the members of that body, Mr. Elliott, seemed to think that he made a sufficient answer to this protest by saying that the appointment would be advertised, and that the gentlemen who had signed it could all become candidates if they chose. He might have known that none of the signatories are likely to care to become candidates, and that all are entitled to the credit of having no selfish motive in taking the course they did.

THE ETHICS OF CHASTISEMENT.

IN the trial at Dublin of Mrs. Montagu, which has closed with her deserved conviction, the lenity of the sentence inflicted is clearly attributable to the fact that in the opinion of the jury this case was one of tyrannical cruelty in which death was accidental. A verdict of murder would probably have been under the circumstances too severe. As regards cruelty there could be no question, and we have here unhappily a fresh illustration of the fact already well proved by experience, that position and education afford no sufficient guarantees for moral goodness. The inner nature, in spite of these external influences, may remain hard and passionate, and the chastisements which have their origin there will be like in character. The ethics of punishment were clearly and briefly summarised by the Solicitor-General in his speech on this occasion, as allowing a "right of giving chastisement [to children] for their moral culture

but the exercise of it must be reasonable, having regard to the age and health of the child." This will be generally accepted as a fair statement of the matter. A parent's will, fancy, or feeling has little to do with it, and indeed severity should not be entirely shunned, if only it be exercised with reason. It is the moral culture which gives to the whole system its keynote. For its fittest and most fruitful method we must rely upon educative more than upon punitive measures. An understanding of the highest moral rule, quite apart from mere maxims of expediency, with a zeal for improving the character, inspired and guided by the great moderating force of love involved, or if this be lacking, as occasionally happens, a sense of duty, instructed by dispassionate wisdom, furnish us with the means of truest success. Thus viewing the matter we recognise a reason for patience, and may fairly hope that the exhibition of its power in trial will prove attractive to those we teach, and will justify and impress on their minds the occasional use of measured and resolute chastisement.

SIR GEORGE BUCHANAN, F.R.S.

WE are gratified to announce that Her Majesty has been pleased to confer the honour of knighthood upon Dr. George Buchanan, on his retirement from the post of Medical Officer to the Local Government Board. A very general desire has been expressed by many who have taken a prominent part and exhibited keen interest in the advance of public health and preventive medicine in this country to mark their sense of the distinguished services which Sir George Buchanan has rendered for so long a period in the health department of the State, and at the same time to show their sense of the loss which his resignation of his official post will entail. The result is that a preliminary meeting has been held, under Dr. Bristowe's auspices, with a view of presenting to Sir George Buchanan some permanent memento of the esteem and regard in which he and his work are held. Sir Henry Acland, who has expressed great personal interest in the matter, will act as chairman of a general committee which will shortly be formed for the purpose. As yet only a small provisional committee has been formed. Together with Sir Henry Acland, K.C.B., and Dr. Bristowe, F.R.S., medical officer of health for Camberwell, the movement is being forwarded by Sir Anthony Home, K.C.B., V.C., M.D.; Dr. Tatham, medical officer of health of Manchester; Dr. Whitelegge, medical officer of health to the West Riding County Council; Dr. MacCabe, of the Local Government Board of Ireland; Dr. W. H. Hamer, of the health department of the London County Council, who will act as metropolitan honorary secretary; and Dr. Thresh, medical officer of health for districts in Essex, who will act as provincial honorary secretary. Dr. Thorne Thorne, F.R.S., of the Local Government Board, has also expressed his desire to serve on the general committee.

METHYLENE BLUE IN MALARIA.

A SHORT time since Guttmann and Ehrlich suggested the use of methylene blue in the treatment of malaria. Thayer has since treated five cases in this manner, and his results are published in the Johns Hopkins Hospital Bulletin, vol. iii., No. 19. The dose administered was one grain and a half five times a day. In all the cases the urine was carefully examined, but at no time was albumen found. In all of the cases in which methylene blue was given alone slight strangury followed within the first three days, which, however, was immediately relieved by nutmeg, and in the cases in which nutmeg was given at the commencement of the treatment there were no unpleasant results. The urine in all the cases assumed a deep blue colour; the *fæces*, although appearing as usual when passed, became blue on exposure to the air. With one exception all the cases were of the more chronic and severe types of malarial fever, those in which the hyaline intra-cellular bodies and crescents have been found in the blood. It is in such cases that quinine is often very slow in its action, and that, even when quinine and arsenic are given together, organisms may be found in the blood for weeks and months. One case of tertian ague yielded almost immediately to the methylene blue, the organisms disappearing on the third day. In another case the organisms had not entirely disappeared in twenty-three days. This was a severe chronic case. In a third case, which appears to have been one of the more severe varieties, no organisms were seen after the ninth or tenth day. In none of the cases was there any chill later than twenty-four hours after the beginning of the administration of the drug. Thayer concludes that methylene blue has certainly a distinct anti-malarial action, a fact which is of great interest, and this treatment is certainly worthy of more extended trial.

DISEASED TINNED MEAT: A CAUTION.

A RECENT conviction in the Liverpool Police-court awakens once more the uneasy suspicion which is apt to be associated, not always unreasonably, with the system of contract supply. It is not difficult to understand the reducing influence exercised on a margin of profit by the lowest cost estimate, and the consequent opportunities of temptation. We may trace these and their effects in every branch of trade, and nowhere more than in the food market. This brings us to the case in question, that of a provision dealer, who seems to have done a large business in tinned meat at the rate of 1½*d.* a pound. A trifling charge indeed, but dear for that which was provided, since we are informed that the contents of 600 tins were found on examination to be "blown" and stinking. The fraud was, in any case, as disgraceful as it could well be. It is satisfactory to know that the heavy fine inflicted on the delinquent dealer must have absorbed considerably more than the slender profits of his dishonest merchandize. The incident is further noteworthy as illustrating once more the truthful force of the rule which bids the buyer beware of imposture—a caution which is in no connexion more needful or more often disregarded than in the purchase of cheap food.

ASSIMILATION OF FAT.

SEVERAL recent Russian graduation dissertations deal with the various conditions which affect the assimilation of fat. Dr. Zvyagintseff has examined the relative assimilation of fat in children fed with fresh and sterilised milk. There does not appear to be any difference, and the amount assimilated during the first three days of a six days' experiment did not differ from that assimilated during the latter three days. He finds that it requires from 90 to 105 minutes to sterilise milk efficiently in a Koch's apparatus; and he is disposed to think that if bottle-fed children were always fed with sterilised milk they would be much more healthy than they are, and their mortality would be greatly diminished. Dr. Bélorussoff finds that warm abdominal compresses diminish the assimilation of fat in healthy subjects, more especially in those who have a good store of fat in the form of subcutaneous adipose tissue, their effects being, on the other hand, less marked in thin subjects. Dr. Popoff administered to a number of healthy persons—students and others—warm baths at 35° C., containing various aromatic herbs, such as rosemary, mint, lavender, &c., and lasting half an hour, for the purpose of determining the alteration produced, if any, in their capacity for assimilating fat. The result was that there was always some increase in the percentage absorbed, the minimum increase being 1·5 and the maximum 6 per cent.

Dr. Shimanski found that warm baths containing oleum pini Sylvestris nearly always increased the fat assimilation, the effect being to some extent prolonged for some few days. Dr. Sprenzhin finds that hot-air baths very slightly increase the assimilation of fat, but when the baths have been stopped there is no appreciable after-effect.

PROFESSOR POLITZER IN LONDON.

PROFESSOR POLITZER of Vienna, being on a visit of a few days to London, Sir William Dalby invited all the aural surgeons attached to the general hospitals in London, as well as many others, to meet him on Monday, April 4th. As all the invitations were accepted, there was a large and representative meeting. Sir William Dalby introduced the distinguished visitor, who gave a highly interesting demonstration of preparations and dissections illustrating the normal and pathological anatomy of the ear. The delicacy of some of the specimens, especially those of the membranous labyrinth prepared by Professor Politzer's own hands from the non-decalcified petrous bone, excited the greatest admiration. Some celloidin and paraffin preparations, which were much more easy to make, were none the less extremely instructive. The temporal bones from fatal cases of mastoiditis following influenza, and from cases of deafness in old persons caused by ankylosis (generally fibrous) of the stapes, aroused considerable interest. Professor Politzer then exhibited a number of his recent additions to the aurist's armamentarium, notably instruments for insufflation and injection into the tympanic "attic," and a strong kind of punch forceps for chipping away the outer wall of that cavity. He referred feelingly to the fact that it was in the very room in which this meeting was held that he received his first enlightenment in otology from the late Mr. Toynbee, and expressed himself as being very much gratified by the reception which he had received.

EPILEPSY AND HEAD INJURY.

AFTER a careful review of the whole subject of the relation of epilepsy to head injury Dr. Putnam of Boston concludes that we need not hope in all cases of injury to prevent convulsions by early trephining and care bestowed upon the wound, and he points out that the local and general injury of the brain are probably of the highest importance in those cases, and quite independent of fracture. He regards of great importance the general treatment of the brain by means of cold applications and prolonged absolute mental rest. As to the cause of the convulsions which occur after injury, he thinks it necessary to seek for some further explanation than mere local irritation, especially in view of the fact that a considerable interval so frequently elapses between the accident and the first convulsion, and he suggests as the cause of the convulsions a degenerative process which increases gradually in extent and probably in intensity. He throws out the suggestion that trephining, for the sake of exploring the condition of parts, may possibly be desirable in the case of patients presenting themselves for the first time after the injury, but before the outbreak of the convulsions, in order to make sure that there is no local condition present which may give rise to irritation or may be the starting-point of degenerative processes.

NEW METHOD OF HARDENING BRAIN TISSUE.

IN a recent number of the *Neurolog. Centralbl.* Professor Stieda of Königsberg gives a short description of a method of hardening the brain which had already been described by him in an anatomical journal. By this method dry preparations are obtained which are extremely useful for purposes of demonstration and study. The specimen is first immersed in a concentrated watery solution of chloride of zinc, so much of the salt being taken as to allow the brain to float. After being twenty-four hours in this, the specimen is removed, and is found to have remained soft, but at the same time to have acquired a certain consistence and toughness, so that the pia mater can be removed without injuring the cortex. The brain is now placed in 96 per cent. alcohol, either as a whole or after separation into parts. To expedite the hardening, it is advisable to renew the alcohol from time to time. In two or three weeks the specimen will be found to be sufficiently hardened. It is then taken out of alcohol and placed in turpentine, in which it should remain from two to four weeks, according to the condition of dehydration in which it was previously to being placed in the turpentine. The process can also be hastened a little by using an incubator, but great care is necessary to prevent shrinking. By means of the turpentine the specimen again becomes soft but transparent, and it has acquired a brownish colour varying in tint with the kind of turpentine used. Finally, the specimen is placed in oil varnish, in which it remains for two weeks. It is then taken out and placed uncovered for a week or two, exposed to the usual temperature of a room, until it is dry and no longer oily to the touch. The final colour is a somewhat pleasing brown; the specimen is but little shrunk, and, as has been said, it is very useful for demonstrations and also for study.

DRUNK OR DYING?

WE have taken the trouble to investigate very fully the circumstances which took place at and preceded the inquest, held on the 31st ult., on a patient aged fifty who died in St. Bartholomew's Hospital from apoplexy. Some of our contemporaries have made severe, but we think unwarrantable, comments on the proceedings at the inquest and the medical evidence. The jury returned a verdict that "The deceased died from apoplexy caused by excessive alcohol," and did not append any rider to this verdict or comment on the medical evidence. The first time the man was brought to the hospital, soon after midnight on March 26th, a small superficial scalp wound over the external occipital protuberance was dressed. Mr. Baker, the house surgeon, roused him with the battery. He smelt strongly of drink. The man gave his name and walked away with the constable's help. An hour later he was sent back on a stretcher with a message that the inspector could not rouse him. When Mr. Baker tried to use the stomach pump the man struggled with all his limbs so that the police constables had to hold him. The passing of the tube made him vomit between two and three pints of beer only (i.e., nothing but beer), and during the vomiting he sat up. No evidence presented itself that his drunkenness did not account for the symptoms present, and he was sent away again, this time on the stretcher. This was at 2 A.M. At 8 A.M. he was brought back, and then had right hemiplegia and aphasia. He gradually became more comatose, and died thirty-three hours later. He had no symptoms of apoplexy on the first two occasions when he was at the hospital. He was apparently only drunk then, and it is probable that hæmorrhage began in the interval between his second and third arrival. After admission it was found he had albuminous urine of low specific gravity; also that he had in his pocket a casualty paper of the hospital, showing he had been attending for chronic headache and buzzing in the ears. The explanation of the case appears therefore to be that a man who was drunk was rightly treated for the condition due to alcohol, and was admitted when taken to the hos-

pital with symptoms giving evidence of the commencement of apoplexy. Mr. Baker has to our knowledge had exceptional experience in the duties of a hospital resident, and his careful examination was supplemented by that of another of the house surgeons when the patient first applied for treatment. No hospital can afford to keep all the drunken men who are brought to it until they have slept off the effects of their debauch on the chance that apoplexy may subsequently occur.

THE INCREASE OF SMALL-POX.

THE occurrence of two or three deaths from small-pox, and the increase of admissions into the Small-pox Hospital, may be but the first droppings of a storm, or they may have no such significance. There are two responsibilities: the responsibility of the authorities to have telegraphic information of cases notified, to isolate the patient, and, if possible, all who have been exposed to the patient's infection; and, finally, to revaccinate all persons in the immediate environment of the patient—friends, nurses, and others. This is the Leicester system, which has been so successful. It is essentially the protection of vaccination, though the authorities are not magnanimous enough to admit it. There is another responsibility—that of the individual for his own protection and that of his family by vaccination and revaccination. Small-pox will laugh at all sanitary advantages where they are not backed by this special protection, and no sensible people will trust to mere public provisions which cannot cover the furtive risks of this locomotive age.

POISONING BY HOMATROPINE.

IN the *Medical News* (New York) Dr. Purley relates the particulars of a case in which symptoms of poisoning by atropine developed after the repeated instillation of drops of a 2 per cent. solution of homatropine into the eyes. The patient was a child of seven, who was the subject of hypermetropia. To procure relaxation of accommodation she was ordered to have homatropine solution dropped into her eyes every fifteen minutes for an hour before returning for examination. She came at the appointed time, and while at Dr. Purley's house nothing unusual was observed. The pupils, as was to be expected, were well dilated. On the way home, however, she became restless and excited, the face was flushed, and her mental condition was peculiar. Her ideas, which were very rapidly expressed, became very incoherent and extravagant, and she saw imaginary objects. Her gait became staggering, hallucinations were very marked and accompanied by mild delirium. She was treatedby the family doctor, and the following morning was very much better, but it was several days before she had entirely recovered. The case is certainly curious, for Dr. Purley calculates that only about two-fifteenths of a grain could have been instilled, and, considering how small a proportion of this was likely to be absorbed, it was scarcely to be expected that toxic symptoms would have been produced.

FOREIGN UNIVERSITY INTELLIGENCE.

Berlin.—Dr. Thierfelder has been appointed custodian of the Hygienic Museum.

Breslau.—Dr. R. Stern has been recognised as *privat-docent.*

Buda-Pesth.—Dr. Ernest Schwimmer has been appointed Extraordinary Professor of Dermatology.—Dr. Emil Moravsik has been appointed Extraordinary Professor of Forensic Medicine.

Havana.—The right of granting the doctorate being about to be taken away, four medical professorships with the corresponding assistants' posts will be suppressed. A considerable sum will of course be saved, but in a manner which will seriously interfere with the scientific position of the colony.

Jena.—Dr. Rossbach is about to resign the chair of Medicine and to retire from the direction of the Medical Clinic.

Lyons.—M. Poncet, Professor of Operative Medicine, has been transferred, at his own request, to the chair of Clinical Surgery, in succession to M. Tripier, deceased.

Munich.—Dr. Hans Buchner, *privat-docent* in Bacteriology, has been granted the status of Extraordinary Professor.—Dr. Amann, of the gynæcological clinic, has been recognised as *privat-docent.*

Munster (*Academy*).—A Professorship of the Chemistry of Foods has been established, to which Dr. Koenig has been appointed.

Paris.—M. Gabriel Pouchet has been appointed Professor of Pharmacology, in succession to M. Regnauld, retired.

Strassburg.—Professor Flückiger, Director of the Pharmaceutical Institute, is about to retire.

WE regret to have to announce the death, on the 3rd inst., of Mr. Charles Hawkins, F.R.C.S., in his eightieth year, at his residence in Duke-street, Portland-place, W. Probably he is best known as having edited the autobiography, lectures, and other literary productions of the late Sir Benjamin Brodie. He was a Fellow, and for some time treasurer, of the Medico-Chirurgical Society, and held the appointment of inspector of Schools of Anatomy in London. He was author of the article, "Lithotrity," in "Holmes's System of Surgery."

A SERIOUS outbreak of scarlet fever appears to have broken out in the neighbourhood of Bexley Heath, Kent. Cases to the number of sixty or seventy had on Saturday last been reported to the medical officer of health, on whose recommendation the churches and chapels in the vicinity were closed on Sunday, and the carrying on of the work of the schools of the locality was ordered to be suspended for the present. A strict inquiry into the origin of the epidemic is called for.

DR. EDWARD DAVIES has been appointed by Mr. B. H. Thelwall, coroner, his deputy for the Eastern or Wrexham division of the county of Denbigh. We understand that it is the intention of Mr. J. C. Davies, L.R.C.P.Lond., of Ruabon, to become a candidate for the coronership (likely soon to become vacant) of East Denbighshire.

THE Otological Congress will be held in Florence in September, 1893, under the presidency of Professor Grazzi. The sitting will be held eight days before the meeting of the International Medical Congress, which will, as already announced, take place in Rome next year.

THE list of names for the Committee on the Registration of Midwives is not yet completed. It will be chosen half by the Committee of Selection and half by the House itself. It is not likely to begin its work till after the Easter holidays.

SIR JOSEPH LISTER, BART., has been elected a member of the Royal Institution.

ROYAL MEDICAL BENEVOLENT COLLEGE, EPSOM.

Special Verbatim Report of the Twenty-sixth Festival, held April 5th, 1892.

THE biennial festival of the Royal Medical Benevolent College is an occasion which awakens widespread interest in the ranks of the medical profession, and it cannot be disputed that the interest manifested is well deserved; especially is that the case at the present time. Founded about fifty years ago, the school is practically contemporaneous with the Queen's reign, and old enough, therefore, to have seen some revolutionary changes take place in the accepted views of those who form and stamp public opinion in reference to matters educational. Epsom College, however, is now well abreast of the times in the development of its teaching work. Its record of successes and distinctions won at the two great universities may fairly be pronounced a brilliant one, regard being had to the comparatively small number (200) of lads for whom the existing buildings and appliances provide accommodation. But it is not only, not even chiefly, as a school where privileged terms are offered to medical practitioners for the education of their sons that the Epsom institution appeals to the medical profession and the still larger British public. By its constitution it is made not only a place of education for children, but also a place of asylum for a certain number of incapacitated medical men or widows of medical men, who are provided with annuities and lodging in their declining years. To this charity is added a further gift to the children of parents so disabled in the shape of a free education in the case of sons at the Epsom College to the number of fifty foundationers; in the case of daughters to the number of seven foundation scholarships in connexion with the College at the St. Anne's Society. The amount of distress which has thus been alleviated during the present reign is quite incalculable, and if nothing more were now proposed than the rendering more effective the machinery which has accomplished so much already, the managers of the College would be entitled to claim the sympathy and support of all who have at heart the interests which have with such excellent results been entrusted to their care.

But the Council of the College are not left at leisure to mature their labours as they might reasonably desire to do, for it has been found that the work of the two departments—the educational and the asylum,—to which we have already referred, cannot easily or well be carried on exactly upon the existing lines. The success of the school has resulted in an enlarged and growing demand for admission which, with the existing accommodation, the Council are not able to satisfy. It is, moreover, in no way surprising that arrangements devised half a century ago should now be found to be somewhat out of date, and only imperfectly adapted to the requirements of educational work directed by modern views as to its aims and methods. For all these reasons the teaching staff cry out for improved accommodation, and the Council, impressed with the reasonableness of the demand, and charged with the important task of discovering and carrying into effect a way of satisfying it, have fallen back upon a scheme which will, we think, command general approbation. The scheme is a bold one; but boldness in such a case is no defect, for no weak and halting measures could conceivably meet the case. The plan which they have adopted involves the disappearance sooner or later of the pensioners from the College precincts at Epsom, and the provision of such additional allowances as will enable them to provide for themselves elsewhere, in order that the space vacated by them may be added to the existing accommodation of the College, and turned to account for educational purposes. Such a scheme involves, of course, a very considerable outlay of money, and seeing that the institution was at the time when this plan was originated seriously embarrassed by debt, the credit of boldness, no less than of discernment, is due to those who first put it forward. Its success is now, indeed, a matter of time only. The debt which a few years ago overshadowed the institution has been entirely cleared off, and an exceedingly good beginning has been made with the collection of the capital fund necessary to float the scheme. At the last festival when the project was launched the Council had much less reason than at the present

moment to look forward with confidence to an early realisation of their wishes. By way of stimulating the zeal of the friends of the institution the Editors of THE LANCET undertook to subscribe to this object the sum of £1000 upon condition that the entire balance of £49,000 was subscribed within two years. The interval has now passed, and although the condition has not been literally fulfilled a commencement has been made so full of the promise of an early completion of the subscription list to its required proportions that the promisers of this conditional donation have seen their way to abating the stringency of the condition and have already paid over to the treasurer the promised sum. They feel that having thus evinced their own confidence in the assured and speedy success of the task in which the Council is engaged they are entitled to commend it to the warm sympathy and practical support of readers of THE LANCET. It will be seen on reference to Dr. Holman's speech, published in another column, that the sum of about £26,000 is now required to carry out the endowment scheme for the pensioners.

In thus advocating the cause of the Epsom College Extension scheme they are happy to find themselves in the company of men whose association with the undertaking is both an undeniable voucher of its wisdom and an effective pledge of its success. We refer not only to the distinguished medical men who assisted at the meeting on Tuesday last, but also to the genial presence of the Right Hon. David Evans, the Lord Mayor, who not only presided, but performed his presidential duties in a manner which left no doubt upon the minds of his guests as to the sincerity of his expressions of interest in the work which the gathering had been convened to promote. We acknowledge this courtesy to the medical profession none the less warmly because Epsom College does not limit its advantages to the sons of medical men. It was felt, and justly felt, by the founders of the school that no advantage was to be gained by excluding the general public from its precincts. On the contrary, it always has been the desire and the practice of medical men to cultivate good and close relations with their neighbours not of their own profession, and less perhaps than most other people are they exposed to the temptation of converting their professional association into a form of caste. Only in one sense is Epsom College *exclusively a medical school*—namely this, that the privileged terms which the possession of an endowment enables the Council to offer, in a certain number of cases, are open only to medical men. The sons of parents not coming within the definition are admitted to the School upon the terms of payment of a fee amounting to £70 a year. These, therefore, are received on terms which compare advantageously with other schools affording equal social and educational advantages, and no one who has sons there is likely to complain upon this score. The distinct advantage which a medical man enjoys could not of course be extended to the general public without destroying the medical character of the school. In all other respects the institution is one that serves the public exactly as it serves the profession, and it is no small satisfaction to those who at the present moment are advocating its claims to be able in an appeal which is addressed not only to medical men, but also to the general public, to rest their advocacy upon such very substantial grounds of distinctly public merit as Epsom College justly claims.

The twenty-sixth biennial festival in aid of the funds of the Royal Medical Benevolent College, Epsom, was held on the evening of Tuesday last in the Whitehall Room of the Hôtel Métropole. The Lord Mayor (the Right Hon. David Evans) presided. He was accompanied by Mr. Sheriff Foster. On his right sat Sir Andrew Clark, Bart., Sir A. W. Hemming, K.C.M.G., and Mr. Wakley, F.R.C.S., and on his left Sir Richard Quain, Bart., President of the General Medical Council, and Mr. Thomas Bryant, President of the Royal College of Surgeons. Among those who were prevented from attending may be mentioned Lord Derby and Lord Gifford. The company, however, was a large and representative one, numbering considerably over two hundred and fifty persons. The object of the gathering was to assist the Council of the institution to provide funds in aid not only of aged and disabled medical men, but also of the children of those medical men who, from death or misfortune, have been unable to provide for their families. The pensioners who receive annuities of £21 each, with furnished rooms in the College at Epsom, must be legally qualified medical men who have been registered for five years, or the widows of such. They must not be less than sixty years of age at the time of their application for admission, and their yearly income, independent of any allowance by the College, must not exceed £60. It was with a view of aiding the funds, in the first place, of this charitable institution, and also of assisting in collecting the sum of £26,000 to enable the Council to carry out a scheme for permitting the removal of the pensioners from the precincts of the College, and, by giving them increased allowances in lieu of furnished rooms, to enable them to reside in their own part of the country instead of at Epsom, that the biennial festival dinner was held. After the dinner,

The LORD MAYOR rose and said—I give you the health of Her Most Gracious Majesty the Queen, and may God bless her.

The toast was drunk with enthusiasm, and was followed by the singing of the National Anthem.

The LORD MAYOR then proposed the toast of "The Prince and Princess of Wales and the other members of the Royal Family." He said: We cannot refrain from expressing our deep sympathy with their Royal Highnesses in the terrible sorrow they have been passing through. We sincerely hope and trust that the change abroad will benefit them, and that they may return with their grief lessened somewhat by the change of scene and the change of rest.

This toast was also drunk with enthusiasm.

The LORD MAYOR next proposed the toast of "The Army, Navy, and Reserve Forces," which he coupled with the name of Colonel Meyer, who briefly responded.

The LORD MAYOR, in proposing the toast of "Success to the Royal Medical Benevolent College, Epsom," said: Gentlemen,—In the first instance, permit me, please, to express the great indebtedness and the great honour I feel in being asked to preside over this influential gathering to-night. It is perfectly true that the Lord Mayor for the time being is asked to undertake several important and responsible duties, but even the Lord Mayor hesitates when he is asked to preside over the interests of so valuable an institution as this. I myself hesitated, feeling that possibly I should not be able to do sufficient justice to your cause and to your interests. However, the executive of the Council thought otherwise, and to-night I am in possession of the chair. I have expressed my pleasure of presiding as

Lord Mayor. There is on this occasion, however, an additional pleasure and interest on my part, for the very simple reason that my residence is within a mile of this college. Scarcely a day goes by that I do not pass it, either riding, or driving, or walking. I am a local man, residing in the locality itself where this institution is placed. And what is it from a local knowledge that I learn and glean with respect to Epsom College? There is nothing so searching as regards an individual as a local knowledge or reference, either for good or for evil. Wherever we are locally placed, and especially in a small village, we soon find out men's virtues and their shortcomings. And what is it that I locally know with respect to Epsom College? That this institution is worthy of its founders, and that to-day it bears the highest reputation in the neighbourhood which surrounds it; and so, I think, it is fitting—at all events, it is not altogether out of place—that as Lord Mayor first of all, and secondly as a local man, living within short distance of the institution, I should preside here to-night. But to me there is an additional interest. It is that the founder, the actual founder of this institution, was a Welshman, and I, needless to say, am a Welshman myself. I come from the county of Glamorgan, and the founder of this institution came from the adjoining county of Cardiganshire. He was but a poor Welsh apothecary. I believe I am speaking in the presence of his son here to-night, but I do not in any way imagine that this reference, even that the term "poor Welsh apothecary," will in any way upset the son's respect for his father. At all events, this Welshman, for a Welshman he was, founded this institution. But for his initiative, we should not have been called here to-night, and all the immense good recorded of this College would have remained unrecorded. For what purpose, then, was it founded? It was founded to provide an asylum and pensions for aged medical men and the widows of medical men in reduced circumstances; and it does not come within the range, unfortunately, of the knowledge of the majority of us that there are practitioners, many of them friends of ours, others known to us, who have become reduced in circumstances, not in the majority of instances through any mistake on their part, but through the sheer force of circumstances. I have myself, when a youth in Wales, watched many hard-working practitioners in the county of Glamorgan; and I have seen many of them—having more especially in my mind one—called out in the middle of the night to saddle his horse, when the rain was pouring down and the wind blowing cold across the mountains, to visit some suffering patients. And attached to that, what? A large fee? No, a very small one, and in all probability an uncollected fee. That is not an overdrawn picture. Though we are speaking now in London, these experiences which I have recounted are not limited to Wales; and there are medical men much nearer, here in the metropolis, of whom very similar tales of devotion might be told. This institution, then, was founded for that object, and in addition that there should be a school open to all classes, but offering special advantages to the sons of medical men, fifty of whom are foundation scholars; and in addition to which, on the pensioners' side, there are fifty pensioners receiving annuities of £21 each. On the question of pensioners there is a slight, and certainly an unfounded, impression abroad that the contemplated scheme for the enlargement of the accommodation at the College would bring with it an amount of injustice to the pensioners. Nothing of the kind is thought of or contemplated. It is not proposed to remove a single pensioner now resident. That would be wrong, unless they consented. But it is proposed that as they die out no more would be admitted. As to compulsion, there is no compulsion, for if the pensioners do not desire to live in the College it is true that they do not get their house accommodation or their clothes. Nothing of any kind could be done by the Council without receiving the approval of Parliament, and that would be a guarantee that it shall be in no sense an unjust arrangement. This College was founded in the year 1851 by the Welshman, John Propert. On the 25th of June, 1855, it was formally opened by H.R.H. the late Prince Consort, who on that occasion was accompanied by the Prince of Wales. What are we asked to do more especially for this institution to-night? No extracts that I can give you from this excellent report can possibly be information to you who are most of you acquainted with the whole surroundings of this College as well as with its ends. But this night is rather an exceptional one, and it brings with it an exceptional appeal. At this dinner we are asked to assist in meeting the annual outlay for the support of fifty pensioners, of fifty foundation scholars, an outlay amounting to between £5000 and £6000 annually. This, needless to say, is a large amount, but appealing as it does to the large hearts of those present, although it may strike one as being somewhat large, no difficulty of any kind will be felt if one and all decide, not only to maintain their annual subscriptions, but to increase them, and to induce others to do the same. Well, now we come to that which I regard as very important—to aid in raising the sum of about £26,000, so that the Council may give the pensioners augmented incomes, and thus dispose of their compulsory residence in Epsom College, and enable them to spend their declining years among their relatives and friends. Well, now, it does strike me that if this could only be accomplished—and it ought not to be impossible—it would be a step in the right direction. You separate, in the first instance, the old from the young. That is a step which will enable that institution to enlarge the sphere of its educational purpose and action, and at the same time bring with it advantages to the pensioners. Is there anything else that I can say? Anything that can be needed at my hands to arouse you to continue and increase your support of this institution? I think not, excepting that the wording of this report with reference to the profession itself, which is so admirably put together that whoever occupied this chair could not possibly do better than read it, for it brings out what should be, and what, I take it, are our feelings and our sympathies for the medical profession, especially to those of them who are in low water and needful of our help and of our assistance. Speaking of the medical man, it says: "He is bound, if he does his duty, and there are few who do not, to hold himself at all times and in all weathers at the disposal of those who may want his help; he attends the poor as well as the rich; he goes to places and houses, unsanitary as well as sanitary; he expends his life in all climates, and at all seasons; with the result that the lives of medical men are shorter than those of men following other professions, and the time within which they can provide for their families is correspondingly shorter." Words beyond what I have uttered are not required from me; I ask you to give, not only your sympathies, but also, to the utmost of your resources, material aid for the furtherance of the object to promote which we have met here to-night. There is nothing to equal the advantage, either in life or in any other movement, of a good start. For the youth we say, "Give the boy a good start." Anything that gives one a start is an impetus of considerable help, and in this movement we have to-night got a very good start, and a start of a practical, substantial, and generous description. You may recollect that the Messrs. Wakley—I take it that the applause is conclusive evidence that the name is not altogether unknown to you—offered the substantial sum of £1000 if the enlargement scheme of £26,000 could be reached. Well, that was somewhat handicapping us largely. The motive was a good one; but when I tell you to-night that the Messrs. Wakley have withdrawn all stipulations with regard to that sum, and that they say: "With a feeling that possibly such a movement on our part may induce others to follow suit, and with the desire that this should be accomplished, and in an unrestricted form, we hand to you and to your list, Mr. President, to-night the sum of £1000." Is not that a good start, and don't you think it will be an inducement to others to follow suit to encourage generous donors, and that before another president occupies this chair the object shall have been accomplished, and that it shall be his privilege to declare that consummation from this chair, and that the sum of £26,000 has been collected; and if that be arrived at, I do venture to say that it will have been largely and instrumentally due to the fact that the Messrs. Wakley so generously gave us this impetus. I have no more to tell you or to say, excepting that it is my earnest anxious desire that this night's proceedings shall be a substantial success. I give you with the greatest possible pleasure, and hope in that success, "Success to the Royal Medical Benevolent College," and to associate with it the name of Dr. Holman, the treasurer. He is a man, in the first instance, well known in the county of Surrey, not very far removed from Epsom College. I am alluding now to Reigate, where, unfortunately for his friends and his

patients there, he is about to vacate, and to come to that greater village, London, where no doubt he will bring all his skill and knowledge for the benefit of the greater number. Therefore, not by way of God-speeding him, but as a recognition of their love and devotion to him, for his eminent services, professional and otherwise, in the past, I know that the people of Reigate and the neighbourhood will not permit Dr. Holman to depart without a mark of their esteem in the shape of a most substantial testimonial as to his value and his exertion and his many services in connexion with this our cause, and it gives me the greatest possible pleasure to associate his name with this toast.

Dr. HOLMAN, in reply, said:—My Lord Mayor, Sheriffs, and Gentlemen,—It is very difficult indeed to return thanks adequately for so large a toast as has been committed to my charge by my colleagues at the College and its Council. I have been present now on many occasions when the cause of this particular institution has been pleaded, but I have never, since the late leader of the House of Commons, William Henry Smith, pleaded our cause, ever heard it done better than to-night. We have had the silver eloquence of a Paget, the humorous sallies of Lord Granville, but the potent, quiet, unassuming manner in which every point which we wanted presented to you has been put forward to-night has seldom been surpassed, and the Council have to thank his lordship most heartily for it. It is perfectly true that two years ago, in this room, I started before you a new idea, and which I then had no warrant whatever from my colleagues for bringing before you. But I had taken counsel with myself and with several gentlemen who had worked with John Propert, and I felt that the proposition put before you was sound. My colleagues in the Council are now with me unanimously, and let it be thoroughly understood that the Council are only following out the views of the family of John Propert in going forward in the course that is now proposed. I ask you, each of you, if you were ill and old and worn out, which would you rather do—would you rather be taken, say from the south of England and transported to Durham or Northumberland, or somewhere or other, to receive £21 per annum, with three tons of coal and free rooms, or would you have its equivalent, and live amongst your friends? It is not a question that ought to be asked for a single moment. And let it be understood once for all that the interest of every pensioner who ever comes within the purview of Epsom College will be thoroughly cared for. No one shall be injured, and no Parliament would ever think of making an Act of this description retrospective. I have found, as far as I can inform myself, that the sum of about £26,000, with the addition of the funds we can now command, would enable the Council to capitalise such a sum of money as would make the position of the pensioner absolutely secure. If that is the case, and if we have a rising school—and we have a rising school,—which is earning its own way, its own honour, and which is improving every year, thanks to the head master and his staff, they tell me that this £26,000 is a sufficient sum. In 1885, seven short years ago, this institution was £11,000 in debt, had ill repute and a diminishing school, and now I turn round and tell you, as the treasurer of the institution, that the school is full. We have an improving and an enlarged property, and now we want more accommodation for the scholars. It is a new departure, it is a good departure, and one for which, as such, I will pledge myself never to rest until the £26,000 are realised. Now, it seems to me a very good suggestion (which has been made since I have been in the room this evening) that many a man hardly likes to commit himself to the idea of being a subscriber for an unlimited number of years to this College, but they may or may not have any interest in this particular scheme. Let them subscribe, say, for five years for this particular purpose, and pledge themselves to it, and they will soon enable me to carry it through. One of England's greatest surgeons has promised £20 annually for life in support of this scheme. Another medical man, a great provincial surgeon, tells me: "I am very greatly impressed with the scheme you propose. I now hand you a cheque for a small sum, and I will put a codicil to my will in which I will leave you £1000." That tells me that the profession is waking up to the value of the scheme I have proposed to you, and you must recollect that we are going on improving the school in a way which has never before been done. As we advantage the school in general, so we particularly advantage the individual foundation scholars who are sent to us to take care of. You cannot send these foundationers to a large school without benefiting them greatly. I do implore you to help your Council to carry out this great reform, and every sixpence of money that you will give will be properly laid out. My Lord Mayor, I thank you for the able and eloquent way in which you have pleaded for us.

Sir ANDREW CLARK, rising to propose the health of the Lord Mayor, said: Our happy—and shall I say in anticipation, our successful?—dinner to-night has had the honour of the presidency of the City of London in the person of the Lord Mayor—the great City of London: the representative of the industries, the wealth, the commercial enterprise of this great nation; shall I add, also, the leader as well as the representative of all the benevolent and all the religious enterprises which characterise this age above every age in the record of civilisation? Well, it has to add two other things, I fancy, to make it a perfect great City of London. With its excitements, its opportunities, its influence, its wealth, it has now to make itself the leader of the intellectual enterprise of this great nation. It has to take and make advantage of the circumstances of the moment, and to subscribe half a million of money to found a new University of London—a university which, by its teaching of the highest knowledge, its dissemination of the truest culture, its promotion of research, shall make it the greatest university of the greatest city of the greatest race which the world has ever seen. Whether it will be wise enough to take advantage of the opportunity I do not know, but I know this, that the opportunity is here, and that if it is missed it will never be recovered. It wants two things. This is one. But there is still another thing. I have ventured to say that it is the leader of the benevolent enterprises which characterise this age more than any other age of civilisation, and if it is the leader of such benevolent enterprises it should be the complete leader, and should cover every great circumstance that comes within this conception of the highest duty. It should turn round to the medical profession and say to it: "We know that you are members of a great profession; we know that you give more than any other profession to the public weal, and that you get back the least of any in return; we know what your toil, your self-sacrifice, ay, and even your martyrdoms, have done for us; and we know that now, when you are wanting help for this great institution, the Royal Medical Benevolent College, and in acknowledgment, not in repayment—the work of the medical profession can never be repaid—but in acknowledgment of our indebtedness to you, we pay up the sum that remains unsubscribed. Here are your twenty thousand pounds." These are the two things, my Lord Mayor, that are wanted to make the City the greatest City of the greatest nation of the greatest race in all the world. I must pass from the City to-night to the person who represents the City of London, and I am commanded to propose the toast of his health, and I have no doubt how you will cordially respond to it. He is a Welshman. If John Propert, the poor Welsh apothecary, with his large heart and his childlike nature, were here in bodily presence with us to-night, how he would rejoice, how he would infect us with his enthusiasm, how he would take extra pinches of snuff, and how he would tell us to honour the Welshman and "come down with the money." Well, there is one thing more, the Lord Mayor is a neighbour of our College, and I think there can be no higher compliment capable of being paid to us than that the neighbour who knows the ill-gossip as well as the good reports, can preside here to-night, and give us by his presence a testimony that our College is worth the presidency even of the Lord Mayor of London. You do not require me to tell you how he has presided over us to-night. The treasurer has told us, and he said he had never heard the cause of the charity advocated in a clearer, simpler, truer, and more efficient way than has been done to-night. I agree with him. It is a pity that the Lord Mayor was not a teacher in one of the hospitals in London, for his power of direct, concise, lucid, and forcible explanation would do honour to the most accomplished teacher. On looking at him I am a little surprised myself, he looks so young, he is so genial, broad, and catholic in all his ideas and words, that I really find it difficult to believe that he is the Lord Mayor of London. But he *is* the Lord Mayor of London, and in giving you his health I would only say, long may the City of London have such Lord Mayors to preside over its councils, and long

may we have such chairmen to preside over such meetings and set before us in such felicitous and persuasive terms the claims of this great institution to your support. I give you the health of the Lord Mayor of London, and wish him long life and prosperity, and success in the high office to which he has been called.

The LORD MAYOR, in response, said: Sir Andrew Clark and Gentlemen,—To you, Sir Andrew, I owe a debt of gratitude for the manner—and I must say, as far as I am personally concerned, the too flattering manner—in which you have referred to myself, but no word uttered by you was in too high and too great praise of the ancient Corporation of which I have the honour at this moment to be the head. The Lord Mayor of this City of London is never out of place when he presides at a charity meeting, and the Mansion House of to-day is the Mansion House of the past reputation, having its doors—and they are wide—thrown open in the cause of all charities. It is a proud position to occupy, that of Lord Mayor of the most important and most ancient Corporation in the world, and any man would be proud of it if it were only for the cause of charity. It does bring back to any Lord Mayor occupying the position an amount of great regret as well as satisfaction—satisfaction in the great honour it is, and in the knowledge that it is instrumental for so much good; and regret to find that, all-powerful as it is, it even falls short of the requirements which daily reach the chief magistrate in his capacity as the head of the Corporation. But it is impossible to satisfy all; but nevertheless, and fortunately so, it is able to satisfy many, and as long as the Corporation and the Lord Mayor for the time being, as long as that individual associates himself as representing the Corporation with the cause of charity, so long would it retain the support and the confidence of the citizens at large; and when, in addition to charity, it takes under its cloak the cause of education, though that has not been a neglected cause—indeed, you can scarcely point to any great movement of to-day which is not met with the warm support and cordiality of the Corporation of London. I thank you for the kind manner in which you have introduced the toast, and again express to you, one and all, the great satisfaction I feel in filling the proud position to night of presiding over this gathering.

Mr. LAMB, the Secretary, then announced that the contributions had amounted to £2926.

The LORD MAYOR then said that as John Propert's son was present, he would ask him to address the meeting, and to give them the value and benefit of a few remarks from him.

Mr. PROPERT, on rising, said he felt he was completely out of order in addressing the meeting, but this was quite an exceptional evening. They had to-night, owing no doubt to the persuasive eloquence of the Lord Mayor, beaten the record in the matter of subscriptions. He was willing to admit most freely that it was chiefly owing to the eloquent speech of their President, but he could not forget that there were two gentlemen present who had enabled them that evening to beat the record by their very great kindness in giving them, without handicapping them in the least, a sum of money which he could only characterise as handsome. Messrs. Wakley, by their conduct that night, had earned the gratitude of every member of the medical profession, and he (Mr. Propert) could not allow that meeting to separate without expressing his best thanks to them for their most generous conduct.

The LORD MAYOR then called upon Mr. Wakley.

Mr. WAKLEY, on rising, said: My Lord Mayor and Gentlemen,—We really could not help doing it. We have been during the last two years really very much disappointed. I was informed by my friends, and especially by our valued treasurer, that supposing a considerable sum was promised, dependent upon a certain amount being subscribed within a stipulated period, many persons of business instincts would subscribe to secure the larger sum. From the very first moment that this grand and splendid institution was conceived by the late Mr. Propert, his son will tell you that his father was a frequent visitor to THE LANCET Office, and in that same room which we now occupy, this charitable movement was constantly discussed, and its details considered. And here I must allude to an expression of my right honourable friend the Lord Mayor. He referred to the late John Propert as the "poor Welsh apothecary," as he was always pleased to call himself; but it is well to add to that, what that poor apothecary became in London. A gentleman with the largest possible practice, attending to the health of the greatest men of the day, and one of the most successful and charitable practitioners in London; among all charitable objects he valued none so dearly as this institution, which we are called upon to support this evening. There is no man whose memory should be honoured by the profession more than that of our lamented friend, John Propert. Gentlemen, at this late hour I cannot say much. An editor's place is in his work-room; but I should desire to say for my son and myself that we have always done what we could for this College, and you will forgive me for mentioning that we propose to give—as after the last biennial dinner—to Dr. Holman for distribution, another supplement of 25,000 copies of the report of this most successful meeting. I do hope and trust that the next Chairman, whoever he may be, will be able to tell you—though I may not be alive to hear it—that you have obtained the required £26,000, and that the pensioners are home with their friends, with whom they can live and be happy. Frequently, as I have passed Epsom College, I have taken occasion to enter into conversation with one or two of the pensioners, and those to whom I have spoken were all anxious to return and live among their friends. I have a strong feeling on this subject. We all know that even the lower animals have an irresistible instinct when sick or injured to return home to die. Here Mr. Wakley related a very touching anecdote illustrative of this natural tendency among the lower animals in the time of suffering; and, in conclusion, he said: I ask you, gentlemen, to make on behalf of this endowment scheme for the pensioners every effort on your own part, and to use your influence among your friends to obtain this amount during the next two years.

Sir RICHARD QUAIN, President of the General Medical Council, said Mr. Wakley had spoken of himself and his son. He wished to say a few words about his father. A nobler man never lived than the late Mr. Wakley, nor one who did more good work in the cause of the medical profession. He remembered THE LANCET when it only consisted of half a dozen pages, but now it was a volume, and this was owing to the enlightened conduct of the present Editors. He would like to bear his testimony in favour of the father, and to repeat that, in his opinion, a more excellent man never lived. It would be impossible to exaggerate the importance of the work which he had accomplished on behalf of his professional brethren. The late Mr. Wakley was intimately acquainted with Mr. Propert, and assisted him to a very great extent in carrying out his plan. He (Sir R. Quain) did not see the name of the British Medical Association as in any way promoting this very important object which they had in view. He earnestly hoped and trusted that the magnificent income which they had, accumulating as it was year by year, would be voted, some of it at least, to the furthering of this object.

After the banquet the intervals between the toasts were enlivened by some excellent vocal and instrumental music.

LIST OF DONATIONS AND SUBSCRIPTIONS.

	Annual subs. £ s. d.	Donations. £ s. d.
The Rt. Hon. the Lord Mayor	—	26 5 0
Wakley, the Messrs., Editors of THE LANCET	—	1000 0 0
Clark, Sir Andrew, Bart., M.D.	—	100 0 0
Lambert, Mrs.	—	100 0 0
Derby, the Earl of ..	—	50 0 0
Mercers, the Worshipful Company of	—	52 10 0
Merchant Taylors, the Worshipful Company of	—	52 10 0
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Colman, Frederick, Esq.	—	10 10 0
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Mayo, A. C., Esq. ..	—	5 5 0

	Annual subs. £ s. d.	Donations. £ s. d.
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Bunting, J., Esq.	1 1 0	—
Ramsay, R. H., M.D. ..	1 1 0	—
Edgelow, W. F., M.D. ..	1 1 0	—
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Stillwell, Dr.	—	1 1 0
Lawford, Dr.	—	1 1 0
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Raven, John, Esq. ..	0 10 6	—
Thompson, Miss	—	0 10 6
Stott, Hugh, Esq. ..	0 10 6	—
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Thompson, H. E. Symes, Esq.	2 2 0	—
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Hayley, Mrs. B.	—	0 10 6
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Gibbings, Ashley, Esq...	—	10 10 0
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Merriman, John J., Esq.	—	5 5 0
Taylor, Herbert P., M.B.	—	2 2 0
Poore, G. V., M.D. ..	—	5 5 0
Emson, Alfred, Esq. ..	1 1 0	—
MacDonald, Dr. P. W...	1 1 0	—
King, F., Esq.	1 1 0	—
Pain, T. D., Esq. ..	1 1 0	—
Hartley, R., Esq. ..	1 1 0	—
Mackinnon, Sir W. A., K.C.B.	2 2 0	—
Colvin-Smith, Surgeon-General, C.B.	1 1 0	—
Eames, Mrs.	1 1 0	—
Burtt, Mrs.	1 1 0	—
Spicer, N. W., Esq. ..	1 1 0	—
Cazenove, Henry, Esq...	2 2 0	—
Smith, the Rev. A. ..	1 1 0	—
Hooper, Mrs. R. B. ..	1 1 0	—
Freeman, Stewart, Esq.	2 2 0	—
Hooper, C., Esq.... ..	1 1 0	—
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Grenside, Miss E. ..	1 1 0	—
Harding, C. O'Brien, Esq.	1 1 0	—
Roberts, A. C., Esq. ..	1 1 0	—
Henderson, Miss E. ..	—	1 1 0
Henderson, Miss M. ..	—	1 1 0
Northey, the Rev. A. E.	—	1 1 0
Miller, F. D., Esq. ..	1 1 0	—
Richardson, Mrs... ..	1 1 0	—
Sutton, M. H., Esq. ..	1 1 0	—
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Hepworth, Francis, Esq.	—	10 10 0
Willington, Clark, Esq...	—	5 5 0
Butlin, Henry T., Esq...	—	5 0 0
Trend, Dr. T. W.... ..	—	5 5 0
Fayrer, Sir Joseph, M.D., K.C.S.I.	—	10 10 0
Wyatt, W. J., M.D. ..	—	5 5 0
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Moore, Milner M., M.D.	—	10 10 0
Fenton, Dr.	—	1 1 0
Hewitt, Miss	—	1 1 0
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Meyer, Col.	10 6	—
Warren, J., Esq... ..	—	5 5 0
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Rawson, Miss	—	2 2 0
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Pickup, Dr. W. J.... ..	1 1	—
Glyn, Sir Richard, Bart.	—	10 10 0
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THE VENICE CONFERENCE ON THE SANITARY CONTROL OF THE SUEZ CANAL.

OFFICIAL PRIVATE REPORT OF THE FRENCH DELEGATES.

IN spite of a certain reticence on the part of the authorities, to which we have already alluded, we have been enabled to peruse the proof sheets of an official report, prepared for the private information of the French Government, on the debate held by the representatives of the fourteen nationalities who recently met at Venice. More than this, we have secured a copy of the protocol they drew up, embodying the French propositions, and which has been signed by the delegates of twelve out of the fourteen nationalities represented. This protocol we have translated as literally as possible. It constitutes the actual text of the new sanitary law which the immense majority of the European Powers desire to see applied to the ships passing through the Suez Canal. This is a matter of such vast importance, both from a commercial and a sanitary point of view, that it is most necessary to possess the actual text of the proposed rules. Therefore we have translated every word of the protocol, but we must be content with summarising the accompanying report.

In laying the matter before the French Government, the French delegates to the Venice Conference annex the protocol drawn up and signed by the Governments of Great Britain and of Austro-Hungary, which formed the basis of discussion. This protocol related to the modifications of the Sanitary Maritime Council of Egypt, to the medical qualifications of its members and their salaries, to the revision of sanitary rules affecting the Suez Canal, pilgrims, &c., to the passing of ships in quarantine through the canal, to increase of financial resources for sanitary purposes, to the creation of a corps of sanitary guards, &c. The most important point at issue was the passing of infected ships through the canal. The Anglo-Austrian protocol proposed that English ships going to a port in Great Britain should be allowed, even when infected, to pass through the canal in quarantine. Against these proposals, which we have very briefly summarised, Dr. Proust, in the name of the French delegation, delivered a set speech of which we have the text before us. He pointed out that at the Sanitary Conferences held at Paris in 1851 and 1852, at Constantinople in 1866, at Vienna in 1874, and at Rome in 1885, the only question discussed was the protection of Europe against the importation of cholera. The Venice Conference, on the contrary, seemed more concerned to secure the free passage of ships whether they were infected or not. Thus commercial rather than sanitary interests seemed to predominate. The Suez Canal, he urged, was very narrow, and at some points it would be difficult to prevent communications with the shore. Then a certain number of extra firemen are taken at Port Said and Ismalia by ships going to the extreme East. On the return journey these firemen disembark at one or the other of these Egyptian ports. This is very difficult to prevent. It was precisely in this manner that the firemen who landed from the ss. *Timour* introduced the cholera into Egypt in 1884. At least, this was the opinion expressed by the German delegation which was sent under the direction of Dr. Koch to study this epidemic. It was also the opinion of Dr. Mabé, the sanitary authority sent by the Sultan to make a similar investigation. Nor can the right to pass in quarantine be granted to one single Power: the mail ships of that Power would have an unfair advantage when competing against other lines of steamers. But for the other Powers, the distance between their ports and Port Said is much shorter than from the English ports. The danger is therefore greater; also fraud is always possible. Thus, in 1890, a steamship obtained permission to pass through the canal in quarantine, as the captain declared he was going direct to an English port. He, however, stopped on the way, and cast anchor in the harbour of Pauillac. One such incident, one case out of a thousand, would suffice to provoke an epidemic in Europe that might last several years, might cause a disastrous mortality, and would bring about the imposition of incoherent and excessive quarantines in Mediterranean, American, and other ports, thus causing far more trouble to the interests of navigation and commerce than the precautions the French delegation proposed. Dr. Proust then described what, in the main, is set forth in the protocol which the Conference ultimately adopted, and which we append to this report. These precautions Dr. Proust defines as, in one word, "affording the greatest possible facilities when a ship has a clean bill of health, or as imposing effective but not vexatious measures against all vessels that are infected or likely to be infected." The most striking argument brought forward is that in which Dr. Proust demonstrates, by quoting statistics, how little these measures would interfere with the traffic in the canal. Thus in 1886 the number of ships passing through the canal amounted to 3100; in 1887 it was 3137; in 1888, 3440; in 1889, 3425; and in 1890, 3389. Of these ships the number which would have come under the category of infected ships, or of "suspects," were, from 1885 to 1891, only two vessels. These two ships passed through the canal in 1886. They were the *Euphrates* and the *Gulf of Mexico*. The one came from Bombay the other from Calcutta. Cases of cholera had occurred on board within six days of their arrival at Suez. One ship had six cases, the other had five. The number of ships that might be qualified as "suspects," and which passed through the canal, was as follows:—13 in 1885, 6 in 1886, 4 in 1887, 8 in 1888, 9 in 1889. Only one in 1890, and 7 in 1891. Thus in the course of seven years there were only fifty ships which would have been stopped at the Wells of Moses for the time necessary to ensure their disinfection. But of these fifty ships there were thirty which passed through the canal in quarantine, so that there remain only twenty which would have been detained for disinfection. We have therefore a total of twenty suspicious ships and two infected ships in the course of seven years. What would be the material effect on the commerce of the world produced by the detention of twenty-two ships out of a total of more than 20,000 ships in the course of seven years? How much greater is the inconvenience and loss likely to be incurred if Europe were exposed to the danger of infection brought to its shores by these twenty-two ships. Dr. Proust added that if better precautions were taken before leaving Eastern ports the number of ships likely to be detained, though already so small, might be still further reduced. For this purpose it would only be necessary to disinfect all dirty linen before taking it on board, or else to disinfect the same during the journey. Dr. Proust warned the Conference of the reaction which would ensue if, through the neglect of prudential measures, cholera once more visited Europe. Quarantine might then be reimposed with more vigour and with results more disastrous than in times gone by.

The speech delivered by Dr. Brouardel, Dean of the Paris Faculty of Medicine, has also been printed for the consideration of the French Government. He insisted that the Anglo-Austrian Protocol did not provide sufficient guarantees against the danger of infection. Science had made great progress since the last Conference. We were now acquainted with the bacilli of cholera. We know that they reside in the dejections of the patient, or in the soiled linen. We know also that the bacillus has a prolonged vitality, that for months it retains its virulence; that at New York, after the lapse of a year, it provoked a new epidemic. He maintained that there were bacilli on board the ships, and simply demanded that they should be destroyed on their arrival at Suez. Our position, he said, was much more favourable than when the previous Sanitary Conference met at Rome in 1885. At that epoch, Dr. Koch had but recently discovered the bacillus of cholera. The matter was still uncertain, but now so many investigations have confirmed the discovery that it is no longer open to question. In 1885 disinfecting stoves were quite a novelty, and their efficacy was still open to doubt. Now they had been in use for several years. Thus the morbid germs and the means of destroying them were known. Why, then, should we not destroy them? Dr. Brouardel proceeded to praise the sanitary measures adopted by the English port authorities, and wished to see similar measures applied at Suez. They might not prove infallible, but, though convicts occasionally escaped from prison, that was no argument in favour of abolishing imprisonment. The precautions proposed for the Suez Canal had already been applied on the Spanish frontier. Each train was stopped and disinfected. There were every day from 300 to 400 passengers and a certain amount of linen to disinfect. The trains were not detained for more than half an hour. The total time required for disinfection at Suez would not exceed seven hours for 300 persons. Then, to avoid even this slight delay, ships might carry their own disinfecting

stoves, and in the course of time what occurred on the Spanish frontier towards the close of the cholera epidemic would also happen at Suez—namely, the passengers would be careful on arriving not to have any dirty linen. As for the contaminated ships—and there were only two in the course of five years—a delay of five days was demanded. It is necessary to clean the ships, the soiled cabins, &c., and the passengers may still be in the period of incubation. This period does not seem to exceed three days, and thus, after the third day, the ship might be allowed to pass through the canal in quarantine if there is a disinfecting stove and a doctor on board. Dr. Brouardel, having explained that the expense of such measures would be small, insisted, on the other hand, on the immense losses resulting from cholera epidemics. In 1884-85 Spain lost 180,000 inhabitants through cholera. Intense misery ensued. At Marseilles the loss in money from the epidemic was estimated at 300,000,000 fr., and a certain number of British subjects shared in this loss, thus proving the solidarity of the interests of commerce and of public health. Referring to the suggestion of an English delegate that each nation should do as it chose, he objected that continental countries were not, as England, separated from each other by the sea. Their intercourse was so intimate that they suffered the one for the defects of the other. Then, if infected vessels were allowed to pass through the canal because they were going to England, what would happen in case of shipwreck on the coasts of the Mediterranean. Were we to refuse help when such ships were in distress? In 1873 a French captain made a false declaration on arriving at Havre. He was given free pratique, and an outbreak of cholera ensued. In 1866 a similar case occurred at Constantinople, and cholera again ensued. During the same year the *Sydney*, under analogous circumstances, imported cholera to Suez. Therefore the declaration of a ship's captain does not suffice.

In the discussion which ensued, Dr. Proust reminded the Conference that the English delegates in 1885 wanted the Suez Canal to be treated as if it were an open sea. But this suggestion was almost unanimously disapproved. It found favour only with the representatives of England and of British India, and was rejected by eighteen votes against two. Answering the criticisms made by the Hon. J. W. Lowther, Dr. Proust did not object to being called a scientific theorist. He was convinced that no prophylactic measure could be good if it did not rest on a scientific basis. He could not guarantee that the measures proposed would be infallible, but they would certainly reduce the danger of importing cholera to a minimum. Nor did he think that there would be any great difficulty in isolating passengers at the Wells of Moses. They proposed to build a hospital and infirmary and a disinfecting establishment, and the whole should be surrounded by a wall, to render surveillance more easy. Mr. Lowther had remarked that the presence of a doctor and a stove on board did not prevent an invasion. But Dr. Proust replied that they facilitated the isolation of the sick and the disinfection of soiled objects. Mr. Lowther had said that the surveillance exercised at Suez had not prevented the epidemic at Damas. But this had no connexion with the Suez Canal, for the cholera came from the Persian Gulf. The French delegation, in view of this fact, were desirous of introducing, at a later period, a resolution in favour of establishing serious measures of control on the Persian Gulf. Suez is undoubtedly the most important door through which the cholera may reach Europe; but this is not the only door we should watch. In 1823, 1830, and 1846 the cholera penetrated Europe by the land route. Cholera follows human currents. The land route was then the most frequented. It will be necessary later on to watch the Persian Gulf. There it was that horse dealers, coming from India, spread cholera through Mesopotamia. Mr. Lowther had said that though England was not seeking to acquire any privileges she was anxious to shield Egypt from the risk of infection; but Dr. Proust, to prevent this risk, did not propose to establish a sanitary station at Suez, and the Wells of Moses had been chosen instead, expressly for the purpose of avoiding the risk to which Mr. Lowther alluded. Ataka might have been selected in preference, but this place is on the African coast—touches Egypt,—whilst the Wells of Moses are separated from Egypt by the canal. The risk of infection is further reduced by the fact that this station would serve only for ordinary ships, while the pilgrim ships would be stopped much further away, at the lazaretto of Gebel Tor.

Such were some of the principal arguments adduced by the French delegates at the Venice Conference. Their pleading proved successful; for the protocol ultimately adopted embodied most of their proposals. The following is the translation we have made from the French text of this international treaty:—

TEXT OF THE PROTOCOL SIGNED BY THE REPRESENTATIVES OF ALL THE POWERS EXCEPTING ENGLAND AND TURKEY.

The principle of the passage in quarantine of ships through the Suez Canal, formulated by the Anglo-Austrian protocol, is accepted on condition that the following measures, destined to protect the public health of Egypt and of Europe, shall be applied. For this purpose ships are to be divided into three classes:—1. Ships with a clean bill of health. 2. Suspected ships. 3. Infected ships.

1. *Ships with a clean bill of health.*—Ships which after medical inspection are declared free from contamination shall have immediate free pratique whatever may be their character. They shall not be submitted to the twenty-four hours' observation actually prescribed against ships of a certain category (*patente brute*).

2. *Suspected ships* shall be qualified as such:—Ships having a case of cholera at the moment of their departure or during the journey, but no fresh case of cholera during the previous seven days. Such ships shall be treated in a different manner according to whether they have or have not on board a doctor and a disinfecting apparatus (stove). (*a*) Ships having on board a doctor and an apparatus for disinfection (stove), fulfilling the required conditions, shall be allowed to pass through the Suez Canal in quarantine under regulations to be indicated further on. (*b*) Other suspected ships not having on board either a doctor or a disinfecting apparatus (stove) shall, before being allowed to pass in quarantine, be detained at the Wells of Moses during the time required to disinfect the dirty linen, body linen, and other susceptible objects, and to ensure the sanitary condition of the vessel. If it is a mail steamer or a steamer especially employed for conveying passengers, which has no disinfecting apparatus (stove) but has a medical man on board, and if the local authority has the assurance, resulting from an official examination, that measures of sanitation and disinfection have been properly applied either at the point of departure or during the journey, passage in quarantine through the canal shall be allowed. If it is a mail steamer or a steamer specially employed for the passenger service, not possessing any disinfecting apparatus but having a doctor on board, if the last case of cholera occurred more than fourteen days previously, and if the sanitary condition of the vessel is satisfactory, free pratique may be given at Suez when the disinfecting operations are terminated. For ships that have effected the passage in less than fourteen days, passengers going to Egypt shall be disembarked at the Wells of Moses and isolated during twenty-four hours, and their dirty linen and other articles in use shall be disinfected. They shall then receive free pratique. Rules shall determine under what conditions the dirty linen shall not all be disinfected.[1]

3. *Infected ships*—that is to say, ships having cholera on board and new cases having occurred within the previous seven days. Such ships shall be divided as ships with a doctor and a disinfecting apparatus (stove) and ships without a doctor and disinfecting apparatus (stove). (*a*) Ships without a doctor and without a disinfecting apparatus (stove) shall be stopped at the Wells of Moses; the patients shall be disembarked and isolated in a hospital. Disinfection shall be carried out in the most complete manner. The other passengers shall be disembarked and isolated in groups composed of as few persons as possible, so that all the passengers shall not suffer if the cholera develops itself in one particular group. The dirty linen, all articles in use, the clothes of the crew and the passengers, shall be disinfected, as also the ship itself. It is well understood that there is no question of discharging the cargo; the disinfection is only applied to the part of the ship that has been infected. The passengers shall remain five days at the establishment at the Wells of Moses. When the cases of cholera occurred several days previously, the duration of this period of isolation may be reduced.

[1] When cholera shall attack only the crew of the ship, the linen of the crew only shall be disinfected, but all the linen of the crew must be disinfected, and all the linen belonging to that part of the ship inhabited by the crew.

This duration will vary according to the date of the last case of cholera. (*b*) The passage in quarantine may even be granted before the end of the five days by the sanitary authority after the disinfection has been carried out, if the ship has a doctor and disinfecting apparatus (stove) on board which fulfils the required conditions. In respect to mail ships, in cases where the disease has only invaded a limited portion of the ship, the local authority shall judge as to the necessity of landing the passengers, and of the number of persons, according to the places they occupied on board, who should land. The local authority shall also decide what portions of the ship must be disinfected. An exception is to be made in cases of transports conveying a large quantity of troops submitted to military discipline. If the ship has a doctor and a disinfecting apparatus (stove) on board, the sanitary authority may order that only the persons lodging in the compartment where the case of illness has occurred shall be forced to land. While they are disembarking, this compartment, or the section of the hospital to which the patients had been transported, together with all the objects used by the persons who were in personal contact with the patients, shall be completely disinfected. The sanitary authority on board shall declare upon oath which are the suspected or the infected compartments of the ship. The dirty linen belonging to the remainder of the troops shall be disinfected on board. Further, a stove, placed on a hulk, may come alongside the ship so as to help in more rapidly carrying out the disinfecting operations.

RULES CONCERNING THE PASSAGE IN QUARANTINE.

1. The sanitary authority at Suez shall grant the permission to pass in quarantine. The Council shall be immediately informed. In doubtful cases the Council shall decide. 2. A telegram shall at once be sent to the authority appointed by each Power. The ship in question shall bear the cost of the despatch. Each Power will decree penalties against the ships which abandon the course indicated by their captains, and unduly enter the ports belonging to the territory of such Powers. Exception is made in cases of accidents of a compulsory character (*force majeur et de relâche forcée*). 3. When boarded, the captain shall be held under the obligation of declaring whether he has on board indigenous native firemen (Lascars and others) or any other sort of paid servant not inscribed on the log book. 4. An officer and two sanitary guards shall go on board. They must accompany the ship to Port Said. Their mission will be to prevent any communications, and to watch and see that the measures prescribed during the journey through the canal are duly executed. 5. The taking on board or the landing of passengers or of goods during the passage through the canal from Suez to Port Said inclusively is forbidden. 6. Ships going through in quarantine must effect the transit without stopping or stationing on the way. In case of running aground or of other unavoidable accidental stopping the operations necessary must be performed by the persons on board, and all communication with the staff of the Suez Canal Company at Suez must be avoided. 7. The stationing of ships passing in quarantine is forbidden at Port Said. The provisioning of ships must be carried out with the resources on board. Stevedores or other persons who shall have gone on board shall be isolated on the quarantine pontoon; their clothes shall be disinfected according to the rules. 8. When it is indispensable for ships passing in quarantine to take coal on board at Port Said, they must carry out this operation outside the port between the jetties. 9. The pilots, the electricians, the agents of the Company, and the sanitary guards shall be disembarked at Port Said, outside the port, between the jetties, and thence conducted to the quarantine pontoon, where their clothes shall be completely disinfected.

Appended to the protocol adopted by the Venice Conference is a series of regulations, describing the preventive measures that should be taken on board ship at the moment of departure, during the journey, and on arriving at Suez. A committee was appointed to draw up these instructions, with Dr. Brouardel as president and Dr. Pagliani and Dr. Ruysch as secretaries. The committee consisted of—For Belgium, M. Beco; Austro-Hungary, Dr. Hagel and Dr. Karlinski; Egypt, Dr. Mahmoud Sidky Pacha; France, Dr. Brouardel, Dr. Proust, and Dr. Catelan. Greece, Dr Zancarol; Germany, Dr. Kulp; Holland, Dr. Ruysch; Turkey, Dr. Arif Bey, Colonel Bonkowski Bey, and Dr. Haïreddin Bey; Italy, Dr. Pagliani and Dr. Torella.

The instructions drawn up by this committee are headed with the following note:—"The germ of cholera is contained in the digestive organs of the patients, its transmission is effected more especially by the dejections and the matter vomited, and consequently by linen, clothes, and hands that have been soiled."

We now translate the directions given by the International Committee:—

I. *Measures to be taken at the point of departure.*—1. The ship's captain must watch and see that no person suffering from a suspicious choleriform complaint shall come on board. He must refuse to allow on board linen, rags, bedding, and, in general, all articles that appear dirty or likely to be contaminated. Bedding, clothes, rags, &c., having belonged to persons suffering from cholera or from a suspicious malady, must not be brought on board. 2. It is highly desirable that when emigrants or troops are to be transported they should be gathered together in groups and watched for five or six days before they are allowed to go on board, so as to ascertain if any among them are contaminated by cholera. 3. Before going on board, the ship must be thoroughly cleansed and, if necessary, thoroughly disinfected. 4. It is indispensable that the water-supply put on board should be taken from a source absolutely exempt from the danger of contamination. There is no danger if the water has been boiled or distilled.

II. *Measures to be taken during the journey.*—1. It is desirable that in each ship there should be a special place reserved for the isolation of persons suffering from a contagious disease. 2. If this does not exist, the cabin or other place occupied by the person attacked by cholera must be isolated. The persons entrusted with the duty of nursing the patient shall alone be allowed to enter, and they in their turn must be removed from the risk of all contact with other persons. Bedding, linen, clothes, and other objects which have been in contact with the patient and in the cabin occupied by the patient must be plunged into a disinfecting solution. The clothes of the person who nursed the patient must be treated in the same manner if they are soiled. Those objects which have no particular value shall be burnt or thrown overboard if the ship is in the open sea and not in the canal or in a port. The more valuable articles shall be conveyed to the disinfecting stove in air-tight sacks dipped in a mercurial solution. If no disinfecting stove exists on board these articles must remain for two hours immersed in a disinfecting solution. 3. The dejections of the patients (vomit and fæcal matter) shall be received in a vase in which a disinfecting solution, which will be described further on, has been previously placed. These dejections must be immediately thrown into the closets, and the closets must be rigorously disinfected each time that the dejections of cholera patients have been thrown into them. 4. The place occupied by the patient must be rigorously disinfected according to the rules indicated further on. 5. The corpses, previously enveloped in a shroud impregnated with a mercurial solution, shall be thrown into the sea. 6. All the prophylactic operations carried out during the journey shall be inscribed in the log-book, to be shown to the medical authorities on arriving at Suez. 7. These rules are applicable to all who have been in personal contact with the patients.

III. *Measures to be taken on the arrival of a ship at Suez.*—1. All ships must be submitted to medical inspection before entering the canal at Suez. 2. This inspection shall be carried out by the sanitary authority of Suez. 3. If the ship is infected, the persons suffering from cholera or who are thought likely to be contaminated shall be disembarked and isolated in a *locale* specially constructed for this purpose near Suez. Shall be considered as likely to be contaminated: All persons having symptoms of cholera, notably diarrhœa. 4. All contaminated or suspicious objects shall be disinfected before the ship enters the Suez Canal. Shall be considered as suspicious objects: Clothes, bedding, mattresses, carpets, and other articles which have been in contact with the patient, as also the clothes of those who have nursed the patient, the objects contained in the cabin occupied by the patients, in the cabins next to the patient's cabin and in passages contiguous.

IV. *The process of disinfection.*—1. The rags, clothes, papers, and other objects of little value shall be destroyed

by fire. 2. Linen, bedding, clothes, mattresses, carpets, papers of value, &c., contaminated or likely to be contaminated, shall be disinfected in stoves by steam under pressure. Only those stoves which have been tested with the aid of a maximum thermometer shall be considered as efficacious disinfecting apparatus. This thermometer must prove that, within the centre of a mattress, 105° to 110° C. have been attained. This degree of heat is slightly in excess of that necessary to kill the known pathogenic micro-organisms. To ensure that the operation is efficacious, the temperature must be maintained at this elevation consecutively for from ten to fifteen minutes. 3. Disinfecting solutions:—(*a*) Sublimated solution of 1 per 1000, with 5 grammes of hydrochloric acid added. This solution should be coloured with fuchsine or eosin. It must not be kept in metallic receptacles. (*b*) A 5 per cent. solution of pure carbolic acid crystals. (*c*) Freshly prepared lime: To secure a very active solution, lime of good quality should be selected and mixed gradually with half its weight of water. When the mixture is effected the powder should be put in a carefully closed vessel and kept in a dry place. 4. Special advice with regard to the employment of disinfecting solutions: All linen and clothes soiled by dejections from the patients must be immersed in a sublimated solution. Such objects as may be deteriorated by exposure to the high temperature of the disinfecting stove—objects such as leather, tables, parquetry, flooring, &c. shall be washed with a sublimated solution. The persons who are attending the cholera patients must wash their hands and faces with a sublimated solution of 1 per 2000. Carbolic acid can be employed to disinfect such objects as are injured by a temperature of more than 100° C, or by contact with the mercurial solution, such as metals, instruments, &c. The lime is specially recommended for the disinfection of the dejections of patients, their vomit, and their alvine evacuations. In its absence, carbolic acid can be employed. 5. The cabins or other parts of the ship occupied by cholera patients or persons suffering from suspicious symptoms shall be emptied and the objects they contain submitted to the above treatment. The walls shall be disinfected with the sublimated solution, containing an addition of 10 per cent. of alcohol. The floor shall be washed with the same solution. Two hours later the whole of these surfaces shall be washed with a large quantity of plain water. 6. To disinfect the hold of a ship, and to neutralise the sulphuretted hydrogen, a sufficient quantity of sulphate of iron should be injected into the bilge water. Afterwards it is to be washed out with sea water; then a certain quantity of sublimated solution may be injected. The bilge water must not be emptied into a port.

THE REFORM OF ATHLETICS.

THIS is a subject of present interest, particularly on the Continent, where the systematic training of the bodily powers forms a far more prominent part of education than among ourselves. In France, in Germany, in Sweden, and in Italy something like an international discussion has for some time been devoted to it—the contribution of the last-named country being especially valuable from the scientific ability of its representative, Professor Angelo Mosso, of Turin. That eminent physiologist, whose doctrine as to the pathology of fatigue is familiar to readers of THE LANCET, attacks the gymnastic system traditional in Italian schools, and in a recent paper in the *Nuova Antologia* insists, as a first step in his argument, on the capital distinction between "robustezza" (robustness) and "forza" (strength). The former, he maintains, is often developed out of proportion to the bodily health, as, in order to ensure an abnormal power of muscle, the other organs are, *pro tanto*, impoverished.

As a consequence modern gymnastics (and not in Italy alone) are open, in physiological eyes, to grave objection. Repeated exercise, he admits, augments muscular force—the muscular tissue itself becoming thickened and the organism habituating itself to the products ("poisonous" as these are) of muscular waste. But, as is well known, during intense strain or extraordinary effort the blood no longer circulates healthily, the respiration is altered, the pulsations of the heart are irregular. The artificially widened thorax, on which the athletic enthusiast so prides himself, is, according to Professor Mosso, of "a highly relative value, for even without such widening we always respire a sufficient quantity of air, and even habitually, as he further maintains (in a special monograph) "we respire more air than is necessary." The gymnastics of the schools have this defect, that they "localise fatigue in some groups of muscles," whereas really healthy exercises should induce a fatigue of the whole body—a symmetrical fatigue—and that gradually. Recent experiments on the results of fatigue of the muscle have shown that that tissue suffers more (pathologically considered) from a maximum than from an ordinary contraction; and, besides, that to the weary muscle a given effort is more hurtful than to the muscle which has rested.

Professor Mosso gives an instructive sketch of the phases through which gymnastics, from the beginning of the nineteenth century to its close, have passed in the schools of Italy. Received at first with enthusiasm, this new adjunct to education became very soon stationary "on account of its military character." Between the two chief gymnastic systems, the Swedish and the German, there was a struggle for popular favour, the former being the more "intense," the latter more gradual, and basing itself on physiological science as then known. Even by the Swedish method, according to Professor Mosso, "the development of the muscles and the 'allenamento' (power of keeping in the breath) are obtained less rapidly than on the traditional Italian system, but its results are more hygienic and more assured." It is, he reminds us incidentally, from the Swedish gymnastics that the so-called "ginnastica chirurgica" and massage took their rise.

Several commissions have, in Italy, undertaken to revise the contending gymnastic systems, and to make salutary innovations accordingly. But Professor Mosso has little confidence in the finality of these. He rather points to France, where, as a means of fortifying future generations, an effort is being made to give gymnastics a soundly scientific direction,—an effort in which the physiologist and the education authorities are coöperating loyally. The first step taken by these reformers was to assimilate from abroad whatever seemed useful and practical, and next to compile a manual of gymnastic exercises, commendable, according to Professor Mosso, for its clear intelligible character and for the cheapness which makes it accessible to all. France, he tells us, has a military school of gymnastics where instructors are prepared for other schools; and he sounds a warning note to Italy, where no corresponding institution exists, to take a leaf out of the French book betimes, while within measurable distance of war, with its rapid mobilisation, and with the energetic movements characteristic of modern strategy. "It is but too true that in Italy politics are all-absorbing, and her legislators think the problem of physical education beneath them." The meagre endowment of her physiological laboratories is fatal to the furtherance of such education—a fact all the more to be lamented when Italy teems with men able to give her a pre-eminence in gymnastics as notable as she has long held in other departments—that of fencing and sword exercise, for example.

At present athletic or gymnastic discipline is not in favour with Italian youth, those schools in which it is practised always numbering many truants from its classes; while the "theory" of such discipline gets more and more involved in unpractical pedantries, irksome to the youth, and embarrassing to the instructor, and erroneous ideas as to the efficacy of certain "intense" forms of exercise come in as a further complication. There is, moreover, the traditional prejudice that during muscular exercise the brain is at rest—a position, according to Professor Mosso, "absolutely false." When the distinguished Hellenist, Professor Sellar made his first appearance on the golfing green at St. Andrews, the mature "caddie" who accompanied him remarked, "Ye may be guid enough, Professor, at teaching laddies Greek; but gouf needs a heid." Professor Mosso is clearly of the "caddie's" opinion.

A frequent defect in modern gymnastic institutions—and not Italian only—is the *locale* in which the exercises take place. This, often confined and sparingly ventilated, more than neutralises whatever good may survive the frequent faultiness of the methods pursued. From this consideration Professor Mosso proceeds to that of the necessity of gymnastic as a means of combating the insanitary influences, always on the increase, of life in industrial and rapidly over-populated cities. Physical education, he concludes, to

be complete, must take in not only the muscular development, but that of other organs. True and healthful gymnastics must be diversified. He appeals to the municipalities of his country to aid in this salutary innovation by giving suitable *locales* for such exercises. But in order that physical education should start fair and advance beneficially, the Government should acquire a just notion of the physiological conditions of the youth frequenting school, so as to modify the hours of attendance, and appoint masters capable of teaching the true "recreative gymnastic," abandoning at once all traditional pedantries, fraught as these are neither with permanent robustness nor general vigour. "E un apostolato," says Signor Mancini, echoing Professor Mosso, "ed una missione degna di ogni uomo di cuore;" and we hope this "crusade," this "mission" of healthily rehabilitating the youth of Italy—aye, and of other countries—may soon find its proper instrument in an enlightened and practical system of "reform in athletics."

SOCIETY FOR THE STUDY OF INEBRIETY.

IN the large room of the Medical Society of London, on Tuesday last, this Society held its eighth annual meeting. The president, Dr. Norman Kerr, after a service of non-intoxicating refreshments, gave some particulars of an appeal he had made to the various temperance and allied societies on behalf of compulsory legislation for the habitual drunkard. Hitherto the temperance and general philanthropic bodies had opposed all such legislation, but the reception of this appeal revealed a marked change. Such great temperance bodies as the Church of England Temperance Society had thoroughly adopted the compulsory platform, recognising a large number of inebriates not as willing offenders but as impelled by a physically diseased condition. This influential Association had formally endorsed the platform of the Inebriety Society, and had taken active steps in agitating a change in the law. Other societies which did not make any official pronouncement on legislation had also approved the proposed actions. The secretary of the Band of Hope Union had said to him (Dr. Kerr) that the disease aspect of inebriety and compulsory legislation dealing with it were now fully accepted. The various female associations had been specially emphatic and unanimous in approval of the Society's legislature proposals. A number of large towns had also resolved to petition Parliament on the subject. Dr. Usher, F.R.G.S., of Melbourne, read a paper on "Some New Methods of Healing Alcoholism, with a theory based upon microscopical and other investigations as to the pathological conditions of the blood, and suggestions as to treatment."

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF INSPECTORS OF THE MEDICAL DEPARTMENT OF THE LOCAL GOVERNMENT BOARD.

On Diphtheria in St. George's, Hanover-square, by Mr. SWEETING.—The occurrence of diphtheria at Bourdon-buildings in the above-named parish was made the subject of inquiry by Mr. Sweeting on behalf of the Local Government Board. The buildings in question belong to a company, and they consist of twenty-four lettings. There was no special overcrowding, and, speaking generally, no particular sanitary defects were noticeable. But, commencing on Oct. 20th, diphtheria had prevailed there during the autumn months, and there had also been cases described under such terms as "tonsillitis." Indeed, out of twenty-three cases, eight were of such a character as to have remained unnotified. All the conditions under which diphtheria and allied sore-throat are known to prevail were investigated; but it was not easy to determine any particular cause as influencing the spread of the disease except school attendance; and it soon appeared that nearly the whole prevalence was related to attendance at one particular school. In the end Mr. Sweeting arrived at the conclusion that the recognised diphtheria had been preceded by occurrences of minor sore-throat ailment; that the disease had no relation to sanitary circumstances, to special milk services, or to disease in the lower animal; that there was a disproportionate incidence of the disease on school attendants, with an excessive incidence on attendants at one special school, and evidence as to the absence of children from this school from time to time owing to affections of the throat, together with proof of return to school in various stages of recovery. In this latter way personal infection through school attendance operated to maintain the prevalence. Precautions were taken to deal with the disease; but it is suggested that longer exclusions from school of affected persons might have helped to extinguish the disease at a much earlier date. Such exclusion, to be successful, must in every case be the result of action by the sanitary authority itself, and it is only likely to be efficient if it is based on the recommendation of the local health officer, who, in turn, must be kept apprised of every fresh occurrence of disease by means of immediate notification.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Ashton-in-Makerfield Urban District.—The death-rate for this district reached 22·7 per 1000 last year, and we can hardly regard the zymotic rate of 2·3 as a small one, especially when it is remembered that for so small a population it has averaged 2·8 during the previous ten years. The infantile death-rate is distinctly excessive, and it is unsatisfactory to read that nuisances which have been associated with enteric fever remain undealt with. The midden-privy system is badly managed and is a cause of nuisance; but at the same time Mr. Nathan Hannah says that good work is carried on, that the sewers have been carefully attended to, and that the hospital has been improved. What is evidently wanted is a detailed record of the sanitary circumstances of every house in the district, but the only thing the authority have done by way of setting a systematic inspection on foot has been to talk about it for "two or three years."

Poole Urban and Port Districts.—The zymotic rate for this district was low in 1891, and the general death-rate was 14·2 per 1000. After discussing certain occurrences of disease, Dr. Lawton speaks of the scavenging and flushing as being well carried out, of a good water-service, of regular inspection of the district, and of prospective improvements as to sewerage. The number of infectious cases coming under notice is not given, but the infectious hospital was not used. In the port 145 inspections of vessels were made, Dr. Lawton undertaking those in which medical points seemed to arise, and as the result improvements in shipping were ordered and effected.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns 6131 births and 4346 deaths were registered during the week ending April 2nd. The annual rate of mortality in these towns, which had been 24·8 and 22·3 per 1000 in the preceding two weeks, further declined to 22·2 last week. In London the rate was 21·4 per 1000, while it averaged 22·8 in the thirty-two provincial towns. The lowest rates in these towns were 14·7 in Croydon, 16·1 in West Ham, 17·1 in Gateshead, and 18·3 in Bradford; the highest rates were 26·5 in Swansea and in Burnley, 26·7 in Halifax, 26·8 in Preston, and 28·1 in Manchester. The 4346 deaths included 427 which were referred to the principal zymotic diseases, against 477 and 435 in the preceding two weeks; of these, 170 resulted from whooping-cough, 134 from measles, 42 from diarrhœa, 33 from scarlet fever, 30 from diphtheria, 16 from "fever" (principally enteric), and 2 from small-pox. No fatal case of any of these diseases was registered in Norwich; in the other towns they caused the lowest rates in Bolton, Gateshead, and Halifax, and the highest in Salford, Liverpool, Sheffield, and Wolverhampton. The greatest mortality from measles occurred in Birkenhead, Birmingham, Sheffield, Liverpool, and Wolverhampton; from scarlet fever in Birkenhead and Cardiff; from whooping-cough in Brighton, Bristol, Salford, Huddersfield, Sheffield, Swansea, and Wolverhampton; and from diarrhœa in Preston and Blackburn. The mortality from "fever"

showed no marked excess in any of the thirty-three large towns. The 30 deaths from diphtheria included 15 in London, 3 in Manchester, 2 in Birmingham, 2 in Bradford, and 2 in Newcastle-upon-Tyne. Two deaths from small-pox were registered in London, but not one in any of the thirty-two provincial towns; 43 cases of this disease were under treatment in the Metropolitan Asylum Hospitals on Saturday last (of which 11 were admitted during the week), and 7 in the Highgate Small-pox Hospital. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of the week was 1227, against 1230 and 1226 on the preceding two Saturdays; 139 new cases were admitted during the week, against 146 and 126 in the previous two weeks. The deaths referred to diseases of the respiratory organs in London, which had been 523 and 466 in the preceding two weeks, further declined last week to 430, and were 44 below the corrected average. The causes of 78, or 1·8 per cent., of the deaths in the thirty-three towns last week were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Cardiff, Croydon, Leicester, Leeds, and in six other smaller towns; the largest proportions of uncertified deaths were registered in West Ham, Preston, Huddersfield, Bradford, and Sheffield.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 24·2 and 23·4 per 1000 in the preceding two weeks, further declined to 21·2 during the week ending April 2nd, and was 1·0 per 1000 below the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 15·6 in Leith and 17·1 in Aberdeen to 23·5 in Glasgow and 27·5 in Perth. The 589 deaths in these towns included 24 which were referred to whooping-cough, 15 to measles, 8 to "fever," 7 to diphtheria, 6 to scarlet fever, 5 to diarrhœa, and not one to small-pox. In all, 65 deaths resulted from these principal zymotic diseases, against 71 and 69 in the preceding two weeks. These 65 deaths were equal to an annual rate of 2·3 per 1000, which slightly exceeded the mean rate last week from the same diseases in the thirty-three large English towns. The fatal cases of whooping-cough, which had been 28 and 34 in the preceding two weeks, declined again last week to 24, of which 11 occurred in Glasgow, 3 in Edinburgh, and 3 in Dundee. The deaths referred to measles, which had declined in the previous three weeks from 16 to 12, rose again to 15 last week, and included 13 in Glasgow. The 8 fatal cases of "fever" showed a further increase upon recent weekly numbers; 3 occurred in Glasgow, 2 in Edinburgh, and 2 in Dundee. The deaths from diphtheria, which had been 5 and 8 in the preceding two weeks, were 7 last week, and included 3 in Glasgow and 2 in Edinburgh. Of the 6 fatal cases of scarlet fever, 5 were recorded in Glasgow. The deaths referred to diseases of the respiratory organs in these towns, which had been 183 and 181 in the preceding two weeks, further declined last week to 158, and were 8 below the number in the corresponding week of last year. The causes of 74, or nearly 13 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had increased in the preceding four weeks from 32·7 to 40·1 per 1000, declined again to 37·3 during the week ending April 2nd. During the thirteen weeks of the quarter ending on Saturday last the death-rate in the city averaged 38·4 per 1000, the rate for the same period being 28·2 in London and 19·8 in Edinburgh. The 250 deaths in Dublin during the week under notice showed a decline of 19 from the high number in the preceding week, and included 24 which were referred to measles, 3 to whooping-cough, 2 to diarrhœa, 1 to "fever," and not one either to small-pox, scarlet fever, or diphtheria. In all, 30 deaths resulted from these principal zymotic diseases, equal to an annual rate of 4·5 per 1000, the zymotic death-rate during the same period being 2·6 in London and 1·8 in Edinburgh. The fatal cases of measles, which had been 12 and 22 in the preceding two weeks, further rose to 24 last week, and exceeded the number recorded in any week since August, 1887. The deaths referred to whooping-cough, which had been 5 in each of the previous two weeks, declined to 3 last week. The 2 fatal cases of diarrhœa were within one of the number returned in the preceding week, and the death referred to "fever" corresponded with the number in the previous week. The 250 deaths in Dublin last week included 43 of infants under one year of age, and 56 of persons aged upwards of sixty years; the deaths of infants exceeded the number in any recent week, while those of elderly persons showed a marked decline. Three inquest cases and 5 deaths from violence were registered; and 91, or more than a third, of the deaths occurred in public institutions. The causes of 25, or 10 per cent., of the deaths in the city last week were not certified.

VITAL STATISTICS OF CALCUTTA AND ITS SUBURBS.

Dr. W. J. Simpson, the Health Officer for Calcutta, in his official memorandum for December last, reports that the total number of births registered during the month was 894, against 783 in the preceding month, giving an annual ratio of 22·9, against 20·1 per 1000 of the population. Of the 894 births, 449 were males and 445 females. The total number of deaths (exclusive of still births) registered in December was 1380 against 1282 in the preceding month, showing an annual ratio of 35·5 per 1000. The proportion of male to female deaths was as 136 to 100. The monthly total exceeds all the corresponding figures of the past decade, excepting 1881 and 1882, and also exceeds the decennial mean by 93. There were 98 deaths from cholera, against 152 in the preceding month, less than the average of the past decade by 80. No deaths from small-pox, but those from fever amounted to 536, against 513 in the preceding month, and in excess of the corresponding figures for the past ten years. There were 47 deaths from tetanus during the month, 41 of which were in infants under one year of age. In the amalgamated area of suburbs there were 486 births registered in December, giving an annual ratio of 27·1 per 1000 of population. The total number of deaths registered was 879, giving an annual ratio of 49·0 per 1000. Of these deaths, 49 were from cholera, 388 from fevers, 154 from bowel complaints, 52 from tetanus, 7 from injuries, and 229 from other causes. There were no deaths from small-pox in the suburbs during the month. According to the weekly return of deaths for the week ending Jan. 23rd, 1892, the latest return received by us, the total number of deaths for the town of Calcutta registered during the week was 309. The general death-rate of the week was 34·5 per 1000 per annum, against 28·2, the mean of the last five years. The general death-rate of the week for the amalgamated area was at the rate of 46·3 per 1000 per annum, against 37·8, the mean of the last five years. The general death-rate of the combined area is equal to 38·2. The prominent and recurring features in these returns from Calcutta and its suburbs are the prevalence of fevers (presumably malarial in their nature), bowel complaints, and tetanus, especially among the infant population.

THE SERVICES.

WE regret to announce the death of Deputy-Surgeon-General Dr. Thomas Fraser from pneumonia, on the 3rd inst., at Exeter. The deceased officer had long retired from the Service. He was for a long time the surgeon of the 10th Hussars, and subsequently was in medical charge of the Royal Military College at Sandhurst. Deputy-Surgeon-General Fraser was very popular and much esteemed whilst in the Medical Service, and the news of his death will be received with much regret by those to whom he was known.

Brigade-Surgeon-Lieutenant-Colonel T. Maunsell, in charge of the 2nd Station Hospital at Aldershot, in anticipation of promotion to Surgeon-Colonel, succeeds Surgeon-Major-General G. L. Hunde, Principal Medical Officer, South-Eastern District, who shortly retires.

ARMY MEDICAL STAFF.—We understand that in future every candidate for a commission in the Army Medical Staff will be required to possess, in addition to the qualifications previously laid down, a certificate of having acted as medical clinical clerk for six months and as surgical dresser for another six months, not less than three months of each period being spent in hospital wards; also a certificate of having attended not less than three months' instruction at an ophthalmic hospital, whose course shall include instruction in the errors of refraction.

Surgeon-Major W. T. Johnston, doing duty in the Belgaum and Bangalore Districts, Madras command, has been appointed to the charge of the Station Hospital, Rangoon; Surgeon-Major A. W. Carleton has been transferred from the Station Hospital, Rangoon, on appointment to the charge of the North Station Hospital at Secunderabad, Madras command; Surgeon-Captain F. T. Skerrett has been transferred for duty in the Madras District from the Station Hospital at Wellington; Surgeon-Lieutenant-Colonel H. W. A. Mackinnon, D.S.O., will, on transfer from Canterbury to Aldershot for duty, be appointed to the charge of the North Camp Hospital, vice Brigade-Surgeon-Lieutenant-Colonel F. Howard; Brigade-Surgeon-Lieutenant-Colonel F. B. Scott, C.M.G., takes charge of the 2nd Station Hospital, vice Brigade-Surgeon-Lieutenant-Colonel T. Maunsell; Surgeon-Captain C. W. Thiele, stationed at the 3rd Station Hospital, Aldershot, has been placed under orders for embarkation for the West Coast of Africa; Surgeon-Captain J. W. Jennings has proceeded from Worcester to Carnarvon to assume medical charge of the 4th Battalion Royal Welsh Fusiliers, and Surgeon-Captain R. J. Windle, from Chester to Beaumaris, in medical charge of the Royal Anglesea Engineering Militia; Surgeon-Captain T. Archer has been struck off the strength of the S.E. District, on proceeding to Bermuda; Surgeon-Captain H. A. de Lom has been posted to the Station Hospital, Western Heights, Dover; Surgeon-Captain R. Kirkpatrick has joined at Easter-road Barracks for duty from Edinburgh Castle, and Surgeon-Captain G. Wilson has joined in his place from Piershill; Surgeon-Captain G. E. Moffett has been transferred from Perth to Fort George, and Surgeon-Captain W. G. Birrell from Fort George to Easter-road Barracks; Surgeon-Captain L. Nash proceeded on the 25th ult. to Hebburn, in medical charge of troops, and Surgeon-Captain S. R. Wills has been posted to Newcastle-on-Tyne; Surgeon-Major J. E. Nicholson has joined the Citadel, Plymouth, for duty; Surgeon-Captain J. H. Brannigan has arrived at Devonport for duty; Surgeon-Captain G. G. Adams has been transferred to Horfield from Cardiff; Surgeon-Captain T. W. Gibbard has joined at Winchester, from Portsmouth; Surgeon-Captains R. C. Johnston and R. G. Thompson have joined the Thames District for duty.—Surgeon-Major-General A. M. Tippette, having attained the age of sixty, has been placed on retired pay.—Surgeon-Major T. J. Gallwey, M.D., Medical Staff, having left for Cairo to take up his appointment in the Egyptian Army, will now be seconded.

ARMY MEDICAL RESERVE OF OFFICERS.—Surgeon-Captain Alfred Herbert Marsh, 3rd Volunteer Battalion, the Cheshire Regiment, to be Surgeon-Lieutenant (dated April 6th, 1892).

NAVAL MEDICAL SERVICE.—The undermentioned Surgeons have been promoted to the rank of Staff Surgeon in Her Majesty's Fleet:—William Manley Lory and William Spencer Lightfoot.—The following appointments have been made at the Admiralty:—Staff-Surgeon Wm. S. Lightfoot to the *Philomel* (dated March 31st, 1892); Surgeons: Edwd. Cooper to the *Victory* (dated April 4th, 1892); Joseph C. Wood to the *Assaye* (dated April 5th, 1892); Richard F. Bate to the *Champion* (undated).

VOLUNTEER CORPS.—*Royal Engineers* (Fortress and Railway Forces): 1st Aberdeenshire: William Sinclair, M.B., to be Surgeon-Lieutenant (dated April 2nd, 1892).—*Rifle:* 1st Surrey (South London): Surgeon-Lieutenant C. S. Smith to be Surgeon-Captain (dated April 2nd, 1892).—1st Volunteer Battalion the Royal Sussex Regiment: Charles William James Chepmell, M.D., to be Surgeon-Lieutenant (dated April 2nd, 1892).—20th Middlesex (Artists'): Surgeon-Captain A. R. F. Evershed resigns his commission (dated April 2nd, 1892).

VOLUNTEER MEDICAL STAFF CORPS.—The Manchester Division: Geo. Clements Richardson, Gent., to be Surgeon-Lieutenant (dated April 2nd, 1892).

ESSEX AND HERTS BENEVOLENT MEDICAL SOCIETY.—The annual report for 1891 of this Society, for the relief of the widows and orphans of medical men in the counties of Essex and Hertford, shows that the total grants for the year amounted to £375. The capital stock, invested in Consols, was £10,053.

Correspondence.

"Audi alteram partem."

THE OPIUM QUESTION.

To the Editors of THE LANCET.

SIRS,—The "opium controversy" has of late attracted considerable attention. It was the subject of an article that appeared in THE LANCET a few weeks ago, and also of a long discussion in the Indian Section of the Society of Arts. A circular has also been widely distributed amongst members of the medical profession, of which I have received a copy, asking us to subscribe to certain propositions regarding the effects of the consumption of opium upon the people of India, and to sign a memorial recommending to the Government of India that the growth and sale of opium in India should be prohibited by law. This document I have not felt myself able to sign, as I am convinced that many of the statements in the memorial and in the covering letter are erroneous, and founded upon imperfect knowledge. Probably a large proportion of the 5000 members of the medical profession whom you state to have signed the memorial have done so on hypothetical grounds, and without any direct or personal knowledge of its merits. I have had rather a long experience of medical practice in India, having had charge of native hospitals, dispensaries, and gaols in nearly all parts of the Bengal Presidency, in the hills, in the Punjab, the North-West Provinces, Lower Bengal, and Orissa, and I have always mingled freely with natives of all classes; so that I have had pretty full opportunity of judging of the effects of the use of opium on the health and well-being of the people generally, and, as the subject is of the greatest medical interest, I venture to ask you to accord me a small space in your influential journal for this letter. I do not propose to enter into the political and financial side of the question. That I would leave to others who have more special knowledge on such matters, and are more capable of forming a correct judgment. Unless, however, it can be clearly established—and this is a medical question—that the use of opium, as we find it in India, leads to anything like common or widespread injury to either the moral or physical well-being of the people, we should, indeed, hesitate before we advocate the giving up a large source of revenue which presses upon no one, and in its place lay additional taxation on, perhaps, the poorest, but at the same time the most patient, thrifty, and industrious, peasantry in the world. It would indeed be a most cruel and tyrannical exercise of England's almost unlimited power in India, perhaps only to remove a sentimental wrong.

In bringing to notice some of the medical and sanitary aspects of the question, I will confine myself chiefly to matters that have come under my personal knowledge and observation. It is well known that the use of opium by the people of India is far from being general or universal. It is very much restricted to certain classes and to certain localities; of those who use opium, some smoke and some eat the drug. As a rule, when the people are in the habit of taking opium they do so in great moderation; there is no general tendency to exceed, any more than with the majority of people at home who take their daily glass or two of wine or beer there is a tendency to drink in excess. In the same way it is, I am convinced, an erroneous notion to suppose that in the moderate quantity in which it is usually taken opium has a deleterious effect upon the health or physique of the people. The Sikhs in the Punjab, perhaps the most hardy, vigorous, and warlike race in India, commonly take opium, and they certainly show no signs of deterioration. Again, the palki-bearers of Behar and Goruckpore, men of small stature and slight build, are perhaps capable of as great or greater physical exertion as any class of men in the world, and that on an amount of nourishment that in this country would hardly satisfy a child. They nearly all smoke opium. I have known a set of twelve men—and eight men will do equally well—carry me in a palanquin a distance of forty miles in a little over ten hours. Of course they take turns to carry, four and four about, but all the men run

through the whole distance. They always halt two or three times during the journey and pass round the opium pipe, and each man takes a few whiffs, and then on again as fresh as if they were just starting. No one can say the opium injures their health or stamina. It is, however, especially in very malarious and feverish localities that opium is most generally used, and it seems then to be almost a necessity. In Assam and Eastern Bengal its use is almost universal, and in Orissa—along the swampy, feverish coast, teeming, one may say, with malaria—nearly all take opium. "It keeps us alive," they say, and, from what I saw of the people and the prevalence of fever amongst them, I believe that it did so. I cannot say that a dose of opium will either prevent or cure a paroxysm of malarious fever as quinine will; but the opium seemed to enable a man to resist the fever and to get through his day's work in spite of it. It may be true that quinine and other drugs would answer better as anti-periodics, but how could these poor peasants ever get enough of such expensive drugs. They can get for a few annas—say, for sixpence, the price of two or three febrifuge doses of quinine—one *tola*, or 180 grains, of opium, enough to last a man for months. It may, I think, be almost accepted as a proof of the benefit of opium in counteracting the bad effects of malaria that we so generally find that in malarious regions the people take opium. I remember the time when its use was very general in the fens of Lincolnshire and Huntingdon, where on market days one would see the country people going in numbers to the chemist's shop, place their penny on the counter, and take up a small packet which contained the week's supply of opium. Whether there is anything of the kind now I do not know. The fens have been drained since then, and perhaps ague and opium-eating are both things of the past.

There is another point in connexion with the use of opium in India which has not, I think, been fairly considered by those who would prohibit it. The peasants of India generally are very poor. They live and toil (and for them there are no restrictions to eight hours' work a day, and no Sunday or weekly holidays) on an almost incredibly small amount of nourishment, according to our English ideas. A daily allowance of 1½ lb. of rice or flour, a little vegetable and butter, and a pinch of salt and spices, is pretty well the whole food of a working man, and there seems to be no doubt that where food is scanty a small quantity of opium tends to prevent rapid waste of tissue, and enables a man to sustain life and vigour on such small allowance of food. I cannot help believing that if the use of opium in India were prohibited, it would inflict an incalculable amount of suffering and injury upon vast numbers of our Indian fellow subjects. Of course, as with everything else, the use of opium may be abused, and no doubt a certain proportion of the opium consumers take it in excess and ruin their minds and bodies. The opium dens and hells in our large towns in India, as in London, show this. Even then the effects of opium are not nearly so bad as those of alcohol. The opium debauchee at least injures himself only, or perhaps those depending upon him. The drunkard not only ruins his own life, but is a danger to his neighbours as well, and drink is the cause of most of the crime in this country. Opium practically leads to no crime, and there is little doubt that if the use of opium could be prevented in India, some other and probably far more deleterious nerve stimulant or sedative, as alcohol or *bhang* (Indian hemp), would take its place. I think that few even of the most sincere supporters of temperance, amongst whom I humbly hope I may include myself, would advocate the passing of a law in England forbidding the sale or consumption of alcoholic drinks, even if such a course were possible. To carry out such a law in India in respect to opium would be equally impossible; I doubt if even our all-powerful Government could do so. Every man in India who wished for it would cultivate his own little patch of poppy, and it would be difficult even for the most autocratic Government to keep watch over and punish millions of people for doing what they thought right; but could such a law be enforced I am strongly of opinion that we should not, in the language of the memorial above noticed, be "seeking the welfare of the people of India."

I am, Sirs, yours faithfully,

HENRY CAYLEY, F.R.C.S.,
Indian Medical Service (retired).

Netley, March 26th, 1892.

DENHOLM v. TAIT.

To the Editors of THE LANCET.

SIRS,—I think you will admit, after reading my letter, that I am entitled to make a few comments in your columns upon the above case, especially since Mr. Lawson Tait has thought proper to address a letter to *The Times* on the subject. The action for libel I felt compelled to bring against Mr. Tait originated in a letter he addressed to the husband of a lady who had died forty-four hours after being operated upon by him for uterine myoma. In this letter the following passage appeared: "The immediate cause of the unfortunate result is the rupture of a bloodvessel at or near the spot where the electrical needles caused so much damaging inflammation and sloughing. Had she never been submitted to that treatment the case would have been a straightforward one, and her recovery almost certain." As I had been solely responsible for the application of this electrical treatment, the husband brought the letter to me with a natural desire to be satisfied how far the accusation was correct.

For the purpose of vindicating my professional reputation, I requested and obtained permission for a post-mortem examination. This examination was conducted by three experienced pathologists totally unknown to me, and the result was to the effect that the patient had died not from hæmorrhage, but from septic peritonitis. I immediately wrote to Mr. Tait to ask him whether he still persisted in his opinion, and he replied not only that he did, but that he was prepared to substantiate it. I was then advised that my only course was to institute an action for libel. The trial lasted three days, and the evidence completely and satisfactorily proved that no electrical needles had ever been used, that the electrical treatment had nothing whatever to do with the cause of death, and that the patient had lost her life from septic peritonitis, entirely due to the operation performed by Mr. Tait. At the conclusion of Mr. Tait's evidence my counsel suggested to me that as Mr. Tait had declared that the letter he sent was not the one he intended, that as I had been fully exonerated by Mr. Tait from all blame, and that as the jury would have to find Mr. Tait guilty of stating that which he knew to be untrue before they could award me a verdict, I might consent to the withdrawal of a juror, with a full and complete understanding that all imputations were withdrawn on both sides. To this I assented, considering, as I still consider, that I was making a generous concession. Mr. Tait's counsel expressed himself as highly satisfied with the withdrawal of the action, and the judge concurred in the prudence of the course I had taken. I also felt satisfied that the dispute had been settled in a manner mutually satisfactory and honourable. Three days later, however, Mr. Tait addressed a letter which appeared in *The Times* of March 29th, in which he stated that he regarded the result of the trial as a "victory!" and reiterated his attack upon me by saying that he reasserted everything he had asserted before, and that he had withdrawn nothing; that is to say, that he still believed that "the immediate cause of death was hæmorrhage due to the use of electric needles." After the appearance of this letter the judge who had tried the action was appealed to in court by my counsel, and requested to state what his impression was of the terms of settlement. His lordship replied that he understood Mr. Tait to withdraw all imputations, and to say that he entirely exonerated me from any negligence or any want of skill in my application of the electric treatment. I am quite willing to leave the issue for your readers to decide whether or not Mr. Tait was justified when he stated in *The Times* that "so far as I am concerned, and by my counsel, I withdraw nothing."

I am, Sirs, yours faithfully,

ANDREW DENHOLM, M.D.

Manchester, April 6th, 1892.

To the Editors of THE LANCET.

SIRS,—In your article on this subject you inadvertently do me an injustice which I am sure you will permit me to correct. You say that "Mr. Tait at the trial still spoke as if he believed that a hæmatocele existed, and might have been found if looked for." There were four witnesses besides myself waiting to prove that they saw the hæmatocele—viz., Mr. Christopher Martin, Mr. Charles Martin, Nurse Trease (three

members of my staff), and Mr. Alfred Freer, surgeon, of Stourbridge—an altogether independent witness who happened to be present at the operation. With the details of this particular hæmatocele and how it killed this patient I shall not trouble you now, for a complete story of this remarkable case will be laid before the profession at as early a date as possible, as an illustration of how important these accidents are and how strangely they have been overlooked. In passing I may say that this is the only instance in which I have known a hæmatocele to prove fatal; but that it did so will elsewhere and in due course be shown by Mr. Christopher Martin, who hardly left the patient from the time of the operation till her death. The case in this as well as in certain other respects is unique.

That the course adopted of consenting to withdraw a juror was a mistake you may well believe, and at first I was very much averse to it, as I wanted the whole thing thrashed out and a verdict of the jury taken; but very many reasons in favour of it can be given, which, however, do not concern the issue raised by your article or require discussion in a medical journal. The reason which chiefly influenced me was that the case had been hurried on to trial with a precipitance enormously to my disadvantage; so that the plaintiff's answers to interrogatories administered on my behalf did not reach us until the case was on the eve of going into court. Not till then did it dawn upon me or upon my advisers that I was practically being put in the dock on two criminal charges, that I had wilfully and maliciously misstated the cause of the patient's death, and that I had recklessly and improperly operated on her. I feel almost certain that most of the plaintiff's witnesses did not realise the full effect of the course they had thought fit to take until they heard my counsel's opening speech, or I am sure they would never have given such evidence as they did, particularly the three young gentlemen who spoke so smilingly of the so-called post-mortem examination, to which, as you emphatically point out, I was not invited.

Further, another action was pending, Tait *v.* Payne. The husband of the patient, also acting on the lines above indicated, stopped the cheque which he had given me after the operation. I entered an action for the recovery of the fee, on the trial of which you will see that I would have had a far better chance of fighting out the whole question, especially as that trial would have taken place in London. The end came, however, with great speed and perfect certainty. No sooner was Denholm *v.* Tait settled than the solicitors for the defendant in Tait *v.* Payne came and made proposals for a settlement. This I refused absolutely, save on the payment of the full fee with costs of the action, and these terms were promptly conceded.

I am, Sirs, yours faithfully,

Birmingham, April 5th, 1892. LAWSON TAIT.

*** We insert the above letters, but it must be clearly understood that we cannot publish any more correspondence on the subject.—ED. L.

"PYRAMIDAL CATARACT."

To the Editors of THE LANCET.

SIRS,—In your last issue you published a letter from Mr. P. H. Mules commenting on a paper of mine which I read before the Ophthalmological Society on the minute anatomy of pyramidal cataract. It is a great pity Mr. Mules was unable to be present at the meeting to hear my paper in full and to see my specimens. Had he been, he would have seen that I did not "divide my cases arbitrarily into groups," but took them according to the time that had elapsed between the formation of the cataract and the excision of the eye—that is, in the order of the age of the opacities. If Mr. Mules had not mislaid his copy of Dr. Samelson's paper, he would have found on referring to it that Professor Schweigger concluded his account of the microscopical examination of the specimen as follows:—"To the question, then, which here chiefly concerns us, whether the cone was interior or exterior to the capsule, we do not obtain a satisfactory answer." This was a point upon which my specimens supplied very definite evidence. The statement "that in the majority of cases pyramidal cataract is found associated with a perfectly transparent cornea" has been made by others besides Mr. Mules, and I presumed that in his article it was a quotation, for it was placed between inverted commas. What I said was quite logical: that before this statement can be accepted as proved it would be necessary to examine pathologically a large number of eyes with opaque corneæ to ascertain the condition of the lenses in them. In the six cases I brought before the Society the cornea was the seat of old or commencing opacity. If these eyes had only been examined clinically the fact that they contained pyramidal cataracts would not have been known.

Mr. Mules finally refers to two cases he has recently operated on in which the pyramid lay outside the capsule. He does not say that he arrived at this conclusion from a microscopical examination of it. Granting, however, that in each case it was outside the capsule, they cannot then be spoken of as opacities of the lens, and were not therefore cataracts. One of the objects I had in view in reading my paper was to confirm definitely that there are opacities at the anterior pole of the lens situated within the capsule, and to which the term "anterior polar cataract" or "pyramidal cataract" can be truly applied. Von Ammon long ago pointed out that portions of the anterior fibro-vascular sheath of the lens may persist. Doubtless sometimes these persistent membranes may closely simulate a true pyramidal cataract. Our object should be to differentiate these two classes of cases and to call the former what they really are—persistent pupillary membranes, not cataracts.

I am, Sirs, yours truly,

E. TREACHER COLLINS.

Devonshire-street, W., April 4th, 1892.

CYSTIC GOITRE.

To the Editors of THE LANCET.

SIRS,—I have read with much interest Mr. O'Reilly's successful case of a large goitre treated by injections and subsequent operation; the more so, perhaps, as I have been using injections in a similar manner, and with a similar double syringe, for some thirty years. I began the use of this method in rather recent cases, withdrawing a small quantity of the liquid and replacing it with an equal amount of alcohol. The idea was to alter the specific gravity of the fluid in the cyst with a view of promoting its absorption, and in moderately recent cases success was obtained. But in more advanced cases not much effect followed. Iodine was tried with a somewhat similar result. Prior to this I had employed this method in pleuritic effusion; but the introduction of the aspirator showed that these may be dealt with much more vigorously. In large cystic goitres the small hypodermic syringe is hardly powerful enough, and in all cases the fine needle is apt to become blocked on account of the flocculent nature of the fluid to be withdrawn. The aspirator needle can be fitted up for the purpose, or, better still, a shorter one of ample bore. Some of the visitors and pupils at the Throat Hospital during the many years I acted as physician to that institution must have seen me employing this method, and the instruments may probably still be at that hospital.

I am, Sirs, yours faithfully,

Deanery-street, Park-lane, April 4th, 1892. PROSSER JAMES.

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

South-West Lancashire Spring Assizes.

LORD CHIEF JUSTICE COLERIDGE is presiding at the present spring assizes, and it is hoped in legal circles that his lordship's visit, which is an unusual event on this circuit, will lead to a reform in our present assize arrangements. The grievances of barristers and jurors are more in evidence than the grievances of witnesses, especially medical witnesses. The local authorities have been ordered to provide better accommodation at the courts for the prisoners waiting their trial, but apparently no notice has been taken of the entire want of any provision at all for medical and other witnesses waiting their appearance before the grand jury. It has been repeatedly stated in previous letters that the medical and other witnesses are all waiting at the top of a flight of stairs, which, with the landing and an adjacent lobby, are the only accommodation for them. One learned judge (Mr. Justice Wills) himself made a point of inspecting personally the places in which prisoners were lodged before entering the dock. Is it too much to hope that

the same learned or some other judge will do the same kind office for witnesses. An inspection of the witnesses' room near the Crown Court and of the outside of the grand jury room at the opening of the assizes, would probably effect in a few minutes that which years of patient reiteration may never accomplish.

More Frequent Assizes required.

The population of Lancashire is rapidly approaching that of London, and yet we have only four assizes in Liverpool and Manchester, while in London there are monthly sittings at the Central Criminal Court. The inconvenience of the present system is keenly felt by medical witnesses residing at a distance, who have to leave their practices and attend day after day for a remuneration which must leave them considerably out of pocket. The holding of an assize every two months would reduce this to a minimum, and would be only in accordance with modern progress.

A Heavy Calendar.

So heavy was the business at Manchester that the assizes in Liverpool had to be postponed for nearly a week, to the great inconvenience of many persons. The number of prisoners and that of civil causes to be tried here is unusually heavy, and both judges will have to sit early and late in order to finish before Easter.

Prevention of Cruelty to Children.

A public meeting was held in the Town Hall, Birkenhead, on the 2nd inst., under the presidency of the Mayor (Alderman Wilmer), for the purpose of forming a branch of the Liverpool Society for the Prevention of Cruelty to Children. The meeting was called in pursuance of an influentially signed requisition, and resolutions in favour of forming the proposed branch and of appointing an influential committee were carried unanimously. The Liverpool Society has done an excellent work in preventing one phase of cruelty—i.e., children of tender age trading in the streets in order to maintain drunken, idle, and cruel parents; and it is hoped that the Birkenhead branch will be equally successful.

Liverpool, April 5th.

NORTHERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENT.)

Newcastle Clinical Society.

THE last meeting of this Society for the session was held on Thursday last. Dr. James Aitchison showed three patients upon whom various joint excisions had been performed two years previously—viz.: (1) Excision of the knee—a female about twenty; (2) excision of wrist, also a female about the same age; (3) excision of ankle—a lad about fifteen, who was now able to take his part at football; amputation had been previously advised and declined in this case. Mr. Morrison showed for Dr. Drummond a case of muscular atrophy following influenza. Dr. H. S. Baumgartner brought forward a case of elephantiasis. Dr. George Murray showed for Dr. Beatley a specimen of pericarditis. Dr. J. A. Jackson read a paper on scarlet fever. The second of the course of sanitary lectures and demonstrations promoted by the Sanitary Institute and the Corporation of Newcastle was delivered last Saturday night at the Guildhall by Mr. A. Wynter Blyth, medical officer of health for St. Marylebone, his subject being House Drainage and Sanitary Appliances. A number of models and appliances were exhibited, and there was a large attendance.

"Milk and Water."

Dr. Armstrong, our medical officer of health for this city, says that the milk trade in Newcastle alone represents a sale of probably not less than 1,500,000 gallons per annum, costing the consumers about £100,000. At the same rate of calculation the amount sold yearly in the United Kingdom is about 250,000,000 gallons, representing a cost of £17,000,000. In 1889, 21 per cent. of the analysed samples of milk in London were adulterated to an estimated aggregate loss to the consumers of £50,000 per annum on an outlay of £2,000,000 sterling. If, as he says, even one-hundredth part of the so-called "milk" be in the form of water, the adulteration means an annual robbery of the Newcastle consumers to the tune of about £1000 and the British public of £170,000.

Middlesbrough and District.

Dr. Malcomson, the medical officer for the Rural Sanitary Authority, reports that during the whole year the health of the district had been very satisfactory, the death-rate only reaching 14·15 per 1000 per annum.—The Saltburn Convalescent Home is announced to be reopened on May 5th and 6th next. "The master masseur" (so says the local paper) has been holding forth to crowded audiences at West Hartlepool.—"The master" does not pretend that the system will completely cure a chronic complaint on being first applied (modest man!), but he maintains if the system is fully carried out it will restore the patient to a healthy condition. Cases of neuralgia and of deafness of fifteen years' standing are nothing in his way. The "master masseur" does not weary his audience by mere talking. A "really first-class concert" forms part of the evening's programme. "The master" himself also, it is said, contributes to the entertainment, showing no mean skill as a singer or reciter. "The master masseur" extracts teeth free of charge, whether he pulls one or a dozen from the same individual, while the banjo performers "soothe away all pain."—Dr. Townsend of Normanby, near Middlesbrough, was the recipient last week, on his return from his honeymoon, of an illuminated address and handsome presents for himself and Mrs. Townsend, subscribed for by over 400 miners of the district. Dr. R. W. Smeddle has also received a presentation in recognition of his services as a lecturer to the North-Eastern Railway Ambulance Class at New Shildon, near Darlington. At Monkwearmouth, Dr. H. Davis has also received a presentation as a token of appreciation of his services to the ambulance class.

The late Mr. John Bowes, Surgeon, of Richmond.

The remains of the late Mr. John Bowes of Richmond were interred in the family vault in that town on last Friday, amid every manifestation of respect. Mr. Bowes did not long survive his brother, who died last Christmas, at an advanced age. Mr. John Bowes died in the South of France, where he had been sojourning for his health for some time. He was thus the last of the well-known medical family, the Bowes of Richmond.

Mr. F. H. Homfray of Gainford, near Darlington, has again been awarded the Government grant for successful vaccination in the Teesdale district.

Newcastle-on-Tyne, April 6th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

Extension of the Edinburgh Royal Infirmary.

A MEETING of the contributors to the Royal Infirmary was held last week to consider the proposed extension of the hospital, at which a report by a committee of contributors was submitted. The report dealt with the first plans submitted by the infirmary managers, which were not approved, and also with negotiations with the directors of the Sick Children's Hospital and with the governors of George Watson's Trust, the result of which was that both these bodies were prepared to hand over the ground required by the Infirmary for the sum of £24,500. The report recommended the acceptance of these terms, as it would give the necessary space for building without overcrowding. On this ground it is proposed to build a pavilion facing the meadows, like the other medical pavilions, and constructed to contain eighty-four beds; two pavilions running east and west, to contain sixty and forty beds, and another small pavilion to contain twelve beds. The adoption of this report was carried, and since the meeting the infirmary managers have completed the negotiations for the transference of the properties.

Edinburgh Royal Hospital for Sick Children.

The directors of this hospital have appointed Mr. John Wheeler Dowden, M.B., C.M., and Mr. Robert D. Clarkson, B.Sc., M.B., C.M., to be resident physicians for six months from May 1st.

Health of Edinburgh.

The mortality last week was 85, and the death-rate 17 per 1000. Diseases of the chest accounted for 40 deaths, and zymotic diseases for 8, of which 3 were due to whooping-cough. The intimations for the week were: typhus fever, 2; typhoid fever, 2; diphtheria, 2; scarlatina, 17; measles, 104.

Edinburgh Professional Examinations.

The second professional examination is still proceeding. Professor Greenfield has not been able to take any part in it, his place being taken by his senior assistant. The new examiners are reported to be giving satisfaction to the students.

City of Glasgow Fever Hospital, Belvidere.

The following extract from the latest monthly report to the Hospitals Committee submitted by the Physician-Superintendent, Dr. J. W. Allan, will be read with interest:—"During the winter session 1891-92 two courses of clinical instruction in Infectious Diseases were conducted, one from Oct. 24th till the Christmas holidays, the other from Jan. 16th till March 12th. In each of these courses an attempt was made to keep the classes strictly to the regulation number—viz., twenty-five each; but, as will be seen from the accompanying figures, that number was rather exceeded. The classes met on Saturday, that being the only day available for students in the winter session, by the present arrangement of medical studies. The number of students attending in a winter session is thus practically restricted to fifty. A much larger number could be undertaken if the medical curriculum were extended and modified so as to give more time and opportunity for coming to Belvidere. At each meeting it was usual to give two forms of instruction—viz: (1) a short lecture in the class room, and (2) bedside demonstrations in the wards. There was thus an attempt at a combination of systematic and clinical teaching, the former necessarily meagre from the very limited time at our disposal." The clinique was attended by sixty students during the session. The attendance was regular, and, so far as was known, not one of them contracted infectious disease from visiting the wards.

The Aberdeen University.

The medical graduation took place at Marischal College on Monday. There was quite the usual amount of noise on the part of the undergraduates, and the Principal thought it best not to deliver the usual special address to the young graduates. Twelve gentlemen were promoted to the degree of M.D., and the theses of Mr. A. R. Cushny, M.A., M.B., C.M., and Mr. James Galloway, M.A., M.B., C.M., were considered worthy of "highest honours," and that of Mr. Edgar Stevenson, M.B., C.M., of "commendation." Forty-one gentlemen received the degrees of M.B. and C.M. Mr. W. Trethowan graduated with "highest honours," and Mr. Davidson, Mr. Duncan Mackintosh, Mr. Thomas W. Ogilvie, Mr. Pirie, and Mr. James Rush graduated with "honourable distinction." The diploma in Public Health "with credit" was conferred on Mr. John T. Wilson, M.B., C.M. Twenty-three gentlemen passed the first division of the first professional examination, forty have completed the first professional, and forty-five have passed the second professional examination. Mr. Ashley Mackintosh, M.A., gained the Fife-Jamieson Memorial Gold Medal in anatomy; Mr. Peter Howie, the Keith Gold Medal for systematic and clinical surgery; Mr. Alexander Stables, the Shepherd Memorial Gold Medal for systematic and practical surgery; and Mr. W. Trethowan, the Matthews Duncan Gold Medal in obstetrics.

April 5th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

Presentation to Mr. Hamilton Burke, F.R.C.S.I.

THIS gentleman, who for many years was senior medical inspector of the Local Government Board, was last week presented with a silver tea and coffee service, silver claret jug, and silver salver, from dispensary medical officers and officers of unions belonging to the province of Leinster. Miss Rita Burke was also presented with a bracelet. The address, which was illuminated, having been read, a suitable reply was given by Mr. Burke, who afterwards entertained the deputation at luncheon. The salver bears an inscription to the effect that it was presented with a silver tea and coffee service to Mr. Burke, on his retirement from the office of medical inspector, Local Government Board, by his many friends among the dispensary, medical, and other principal union officers of the province of Leinster, in appreciation of his invariable kindness, consideration, and courtesy to them during the many years of his official charge of that extensive district.

Dinner to Surgeon-Major-General J. Sinclair.

A farewell dinner was given recently at the Shelbourne Hotel by officers of the Medical Staff in Ireland on the active and retired list to Surgeon-Major-General J. Sinclair, who occupied the post of Principal Medical Officer in Ireland until March 28th last, when he was placed on the retired list. Surgeon-Colonel Collis succeeds Surgeon-General Sinclair as Principal Medical Officer in Ireland.

Health of Ireland in 1891.

The total births registered in Ireland during the year 1891 amounted to 107,883, or 23·0 per 1000, and the total number of deaths was 86 053, or 18·4 per 1000. Of these 86,053 deaths, 4406—a number equal to 0·9 per 1000 living—were caused by one or other of the principal zymotic diseases.

Royal College of Surgeons.

It is intended to present the President, Mr. Croly, with his portrait on the occasion of his retirement, on the completion of his second year as President of the College. Dr. Edward Hamilton has issued cards as a candidate for the presidency of the College for 1892 and 1893.

Proposed Hospital for Consumption.

Dublin has naturally a damp climate, and it has occurred to many that locating a hospital which is expected to be a curative institution in or near Dublin would be a great mistake. There are counties, it is urged, in Ireland where the winters are much milder than the county Dublin, and where the temperature is more equable. There is one place peculiarly situated, and for which it is claimed that at the present season of the year it is the warmest district in the United Kingdom, and the place, above all others, where an invalid may with comparative comfort and safety sojourn. This is Glengarriff, styled by a recent author "The Madeira" of Ireland, which is situated on the south-west Irish coast. It lies in a vale, protected on all sides from the cold and sharp winds by lofty mountains, the only wind that has free access to it being from the south. As a winter resort, the author above referred to says that Glengarriff has no equal in Ireland. It has a mean winter temperature of 45°, and its mean annual temperature is 52°, a higher mean annual temperature than the most noted of the English winter health resorts. In the months of December, January, February, March, and April the climate at Glengarriff is exceptionally mild, and there is an unusually large amount of daily sunshine, permitting of free exercise in the open air, which to the invalid at that season of the year is a great and manifest advantage. There are difficulties, no doubt, in the way; but if a hospital for phthisis is to be established, why not erect it in the most suitable position that can be obtained, either in Kerry or elsewhere?

Dublin Sanitary Association.

The report of the council for the past year again protests against the large number of private slaughterhouses in the city, as being a source of danger to the health of the citizens. The annual death-rate in Dublin last year was 25·5 per 1000 as compared with 26 3 the previous year. In the city there was a reduction from 29·0 to 28·5, while in the suburbs there was a reduction from 19·9 to 18·5, which is an exceptionally low rate. It is satisfactory to note that in spite of the influenza epidemic, which in both of the last two years considerably swelled the number of deaths from diseases of the respiratory organs, the general death-rate both in the city and suburbs for 1891 was below the average of the last ten years, and that the typhoid epidemic which attracted so much public attention last autumn did not eventuate in any considerable increase of the total deaths from fever (202), which were less than in any of the last ten years, except in 1886 and 1887, when the deaths from fevers of all kinds were only 192 and 193 respectively. The most striking feature in the returns for last year is the extraordinarily small number of deaths from measles and scarlet fever, which together caused only 9 deaths. The report being adopted, the president read an address on the subject of preventable diseases, and the proceedings terminated.

It is proposed to erect a memorial window in Kildare Cathedral to the memory of the late Mr. S. Chaplin, F.R.C.S.I.

April 5th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Horse-racing and Charity.

IT is only a long residence in this city that enables the student of human nature to appreciate the important part taken by horse-racing in the thoughts of a large section of our population. *Garçons de café*, shop boys, small tradesmen, and clerks, these are the individuals who, with marvellous recklessness, risk again and again their small earnings on the chances of a "good tip." The powers that be, accepting the gaming propensities of the populace as an unavoidable nuisance, have very wisely taken measures to divert some of the invested cash into charitable channels. To this intent, it is ordained that a certain percentage of the money staked shall revert to the Assistance Publique, and that the charities of the country in general gain considerably by this arrangement is proved by the fact that no less a sum than 800,000 francs has just been allotted to those judged the most deserving or necessitous. Of this large sum, 700,000 francs have been set apart for the purpose of constructing a hospital at Blanchefasse (Seine-et-Oise) for the consumptives of Paris. The architectural details of this projected building will be a reflex of recent advances made in the knowledge of the etiology and therapeutics of King Phthisis. The surplus of the betting fund will be devoted to such laudable purposes as the installation of a disinfecting stove at the Rennes hospital, the support of the Retreat for the Aged Poor at Salarre in the department of Ariège, and to the furtherance of the revaccination campaign under the auspices of the Paris Academy of Medicine. "'Tis an ill wind that blows nobody any good," and we once more see how human folly can be turned to good account. Might not a similar arrangement be adopted by *ces gens pratiques par excellence, Messieurs les Anglais?* The British poor would assuredly have no objection.

Military Hospital Gossip.

While on the subject of hospital construction I may mention that it has been decided by the War Office to suppress the existing urban military hospitals St. Martin and Gros-Caillou, and to replace them by a single new establishment, which shall be situated outside Paris. The situation has not yet been selected; but it is intended to provide for the easy conveyance of patients from the different barracks of Paris to the new hospital by the construction of a special tramway line. The present clumsy, jolting, and slow system of transport by ambulance waggons will thus be superseded, to the great advantage of individual sufferers and of the service in general. The new hospital will contain 600 beds. This centralisation of the military sick will entail a loss of about twenty beds, but it is thought that the addition of a few beds to the Val-de-Grâce hospital and the better utilisation of the regimental infirmaries will more than make good this deficiency. The nursing at military hospitals was, during the imperial *régime* and at the suggestion of the Empress Eugénie, entrusted to *religieuses*. An arrangement was, for this purpose, entered into between the Government and the different religious orders, such as the St. Vincent-de-Paul, and it appears that this treaty will shortly lapse. Meanwhile, the work of ousting the religious element from hospital nursing staffs is being extended to military establishments. Of the forty sisters placed by the Empress at the Val-de-Grâce hospital, there now only remain twenty. Despite the protests of such journals as *Le Soleil* and *Le Gaulois*, it is evident that the picturesque *sœur* is doomed to disappear at no very distant date from the wards of French hospitals, both civil and military. The status of officers under treatment in a military hospital has hitherto been a matter of doubt, it being a moot point whether the fact of his occupying a bed in such an establishment deprives him temporarily of his privileges as an officer. The question has recently been settled so far as the French army is concerned. The circumstances leading to the decision are these: An officer under treatment at Val-de-Grâce Hospital put a hospital orderly under arrest for having neglected to address him as "*Mon lieutenant.*" The *médecin en chef* promptly cancelled the punishment, whereupon the wrathful officer appealed, first to the military governor of Paris, who upheld the action of the chief surgeon, and finally to the Minister of War. The Minister referred the matter to a committee, who took the same view as the governor of Paris. The reasons upon which the decision is based are given *in extenso*. Thus it is stated that the dress worn by officers while in hospital is not distinctive, and orderlies are consequently not supposed to recognise the grade of such patients. It has also, in the interests of the patients themselves, been enacted that orderlies are not to obey the orders of officer patients. Were it not so, such patients might compel *infirmiers* to supply them with forbidden articles like alcohol, tobacco, &c. The French army surgeon can now breathe freely; his position is distinctly defined; he is supreme in his own wards. This is as it should be.

A Great Scandal at the Faculty of Medicine.

There is held periodically at the Paris Faculty of Medicine a competitive examination for the filling up of any vacancies that may occur in the list of *professeurs-agrégés* in medicine or surgery or obstetrics at the metropolitan and provincial faculties. The examining board is composed of professors of the Paris and provincial faculties, the president nominated this year by the Ministry of Public Instruction for the examination in medicine being Professor Bouchard. When the result of this very difficult and long competition was announced a fortnight ago the absence of certain well-known names from the list of successful candidates was much commented on, and charges of favouritism and infringements of regulations in the conduct of the examination were boldly formulated both in the lay and professional press. The choice of the professors composing the Board of Examiners lies with the president of the board, himself nominated as above mentioned by the Minister of Public Instruction. A general charge is made that the discretionary power thus conferred on the president is taken advantage of in order to form a jury whose sympathies will naturally incline towards any candidates favoured by the president. It is further pointed out that the choice of a president at this year's *concours* was particularly unfortunate, seeing that Professor Bouchard, without having the title, exercises the functions of the technically suppressed post of inspector-general of faculties and schools of medicine. The irregularity alleged to have occurred in the conduct of the examination consists in this—that it was postponed for twenty-four hours pending the recovery from indisposition of Professor Sée, a member of the jury. When M. Germain Sée had recovered he could only attend during three days, and the proceedings were continued without filling up the vacancy caused by his definite retirement, which constituted yet another irregularity. Of the five successful candidates for the Paris faculty it is said that three are pupils of M. Bouchard, that three of the five are not hospital physicians, and have published no particularly important works, and, finally, that three out of the five unsuccessful candidates are not only hospital physicians, but are well known for their valuable contributions to medical science. For these various reasons the unsuccessful competitors have sent a petition to the Minister praying him to annul the choice of the examiners. That their contention merits consideration is probable from the fact that no less a personage than Professor Cornil presented the discontented phalanx to M. Lesage, Avocat au Conseil d'État, who is to champion their cause.

Operative Treatment of Spina Bifida.

An instructive paper on the above subject was read by M. Monod at a meeting of the Société de Chirurgie, held on March 16th, the *mémoire* being based upon the report of a case successfully operated on by M. Walther. The patient was a new-born infant affected with a voluminous spina bifida, which reached from the first sacral vertebra to within 1 c. of the anus, its length being 12 c. Half-way down from its base the cutaneous covering was suddenly replaced by a delicate transparent membrane, which the slightest excess of tension would have easily ruptured. Four hours after birth M. Walther performed the following operation:—After a preliminary tapping, which gave rise to 220 grammes of a limpid fluid, two lateral flaps of skin were detached from the surface of the sac, which, after being laid open, was itself dissected as far as the edges of the vertebral orifice (this was only 2 millimetres wide), and resected after being ligatured with silk. The flaps were then reunited over the pedicle, a salol dressing, with a thick collodion coating over all, completing the operation. The sutures were removed six days later,

leaving a wound completely cicatrised. A fortnight after the operation the child was exhibited. The cicatrix was then firm; no impulse could be detected during efforts, nor could any motor or sensory change in the lower extremities be discovered. Notwithstanding the favourable features presented by this case—viz., its situation, absence of cord and nerves from the sac, narrowness of the orifice of communication with the vertebral canal—M. Monod, in his admirable *résumé* of the results yielded by the divers treatments practised for the relief of this congenital condition, deems it worthy of record with the thirty equally successful cases already published by French and other surgeons, amongst the English being Mayo Robson, Sinclair, and Barton. It is only fair, however, to recall the failures that have attended this form of surgical intervention. Bellanger (Thèse de Paris, 1891) tells us that of 24 cases thus operated on, 8 died—a mortality of 33·3 per cent. This is only what one might expect, for, as M. Monod very aptly remarks, there are spinæ bifidæ and spinæ bifidæ. The varying anatomical relations of the tumour readily explain the success of the elastic ligature, of compression exercised by means of Rizzoli's forceps &c. The diagnosis of the contents of the sac being generally a matter of conjecture, we cannot help predicting that whenever sufficient skin exists over the tumour to form flaps the *méthode sanglante* will tend to become the *méthode de choix*. Even should nervous elements be found in the sac, the experience of Périer, Hildebrand, Rosenbach, Bayer, Cockburn, Picqué, and Guttenbauer shows that they can be dissected off its inner surface and pushed back into the canal without compromising the success of the operation. The radical cure can, moreover, by this means be rendered complete. Mayo Robson attempted to close the vertebral opening by transplanting a periosteal flap derived from an animal; Dollinger and Senenko brought the laminæ together by suture after having fractured them at their base; while, more recently, M. Berger succeeded in filling up the interval by grafting bone taken from a rabbit. I myself had the advantage of witnessing this operation as performed by M. Berger at the Lariboisière Hospital. Should operative measures be out of the question, M. Monod advises recourse being had to injections with Morton's solution, of which he speaks very highly.

April h.

BERLIN.

(FROM OUR OWN CORRESPONDENT.)

The Death of the Sleeping Miner.

THE Silesian miner, Johann Latus, who slept from Sept. 17th, 1891, till Jan. 30th, 1892, died the other day. The necropsy showed that death was simply the natural end of a state of profound exhaustion caused by the morbid conditions consequent on lying motionless so long. The chief of these was the gangrenous state of the lungs, due perhaps to the accumulation of blood in them during the long sleep, but perhaps also to the passing of portions of food and drink into them, owing to the weakness of the patient after awaking. Except slight meningitis of very recent date the brain was perfectly intact. Deposits of a nature not yet ascertained were found, which surrounded the substance of the spinal cord. These deposits will be microscopically examined, but their presence on the cord is believed to be a sufficient reason for the phenomena of this remarkable case. They were found round the motor nerves only, which explains why the skin during the long sleep was sensitive even to slight irritations, whereas the limbs lay stiff and motionless, and could be bent only by the exertion of considerable force.

The Langenbeck House.

The Langenbeck House is to be opened on the occasion of the twenty-first congress of the German Surgical Society, to be held here from the 8th to the 12th of next June. An exhibition of surgical instruments and apparatus is to be held in connexion with this inauguration and with the congress, and intending exhibitors should apply to Dr. A. Koehler, Luisenstrasse 48, or to Dr. B. Schimmelbusch, Ziegelstrasse 5-9, before May 1st. Langenbeck's eldest daughter (the Countess Hardenberg) has presented the House with a life-size portrait of her father, painted by Schrader.

The Removal of Rubbish.

The German Public Health Society occupied itself at its sitting last Monday with the question how the rubbish of Berlin could be better got rid of than at present. Dr. Theodor Weyl proposed some time ago that it should be burned in destructors, on the ground that this system is successfully applied in England and Belgium. Geheimerath Spinola remarked, with reference to this, that Herr Schlossky, who has to superintend the cleansing of the Berlin streets, does not think the use of Fryer's destructors suitable for Berlin, that the municipal authorities of this city, however, recognise the necessity of a change in the matter in question, and that a partial remedy is about to be applied by the establishment of a central place outside the city, to which all the rubbish will be conveyed by water. Dr. Weyl went minutely into the question whether the Berlin rubbish is fitted for being burned in destructors. The objection that English rubbish, being richer in coal, is easier to burn was met by Dr. Weyl's statement that English rubbish is quite easily burned in summer, when its coal contents are considerably less than in winter. He dwelt on the hygienic drawbacks of the system now followed here.

Professor Flückiger.

Professor Flückiger of Strasburg, who now retires into private life, has taught in the university of that city since 1873. Before his appointment there he held a professorship in the University of Berne, and also the office of a State apothecary. His writings are among the necessary helps of pharmaceutists, and comprise valuable contributions to the history of pharmaceutics.

Professor Joseph Koenig.

A professorship of the Chemistry of Food and Drink has been founded at Muenster, and Dr. Joseph Koenig, who has been at the head of the Experimental Institute for Agricultural Chemistry there since 1871, has been appointed to fill it. He is the author of important writings on the subject which he is now appointed to teach.

Dr. Robert Sommer.

Dr. Robert Sommer has established himself as a private lecturer at Würzburg. He is known as a student of philosophy as well as of medicine, and has published a treatise on the origin of the mechanical school of medicine in the end of the seventeenth century. He is assistant to Professor Rieger in the University Clinic for Mental Disease in Würzburg.

Statistics.

In the week which ended on the 19th ult. 2 persons died in Berlin from erysipelas, 2 from puerperal fever, 2 from articular rheumatism, 2 from syphilis, 3 from quinsy, 4 from typhus fever, 7 from gastro-intestinal catarrh, 8 from whooping-cough, 9 from influenza, 10 from scarlatina, 12 from measles, 19 from diarrhœa with vomiting, 21 from diarrhœa, 22 from cerebral apoplexy, 23 from diphtheria, 35 from senile decrepitude, 46 from pneumonia, and 91 from pulmonary phthisis; 4 persons poisoned themselves; 14 died violent deaths, eleven of them by suicide. The mortality of Hamburg was 21; of Berlin, 21·1; of Dresden, 22·9; of Breslau, 25·5; of Munich, 29·6. Of the German cities with more than 100,000 inhabitants, Stettin had the lowest mortality (18·4), Cologne the highest (33·7).

Berlin, April 4th.

AUSTRALIA.

(FROM OUR OWN CORRESPONDENT.)

Medical Legislation in New South Wales.

I MENTIONED in a former communication that the Ministry of which Mr. Dibbs is head had brought in a Bill to regulate the practice of medicine. This project of law has now passed the Upper House, and being a Government measure, will very likely be presented to the Legislative Assembly before the session closes. The Bill contains a preamble, twenty-eight clauses, and three schedules. It is introduced "to enable persons requiring medical or surgical advice or aid to distinguish qualified from unqualified practitioners." So runs the preamble, and the measure, if passed, will fully justify the preamble, for under its provisions all the uneducated quacks in the colony will be raised to the level of qualified practitioners. The outline of the Bill is briefly this. The present Medical Board, whose only duty is to inspect diplomas and register

them, without asking any questions, and who have not the power to strike even the names of dead doctors off that Register, is superseded by a Medical Council of ten persons. Five of these are nominated by the Crown and five by the Senate of the Sydney University. There is no provision for the direct representation of the profession. An official Register is established, to be in the keeping and under the control of the Council. The Council may register any diploma or degree on proof that the person submitting the diploma or degree is the person named in the papers submitted, and on further proof that the college or university from which the diploma or degree has emanated required a course of medical study of not less than four years. Schedule 2 enumerates all the colleges and universities of the United Kingdom as qualifying bodies under the Act. All practitioners at present on the Register of the colony shall on the passing of the Act become unregistered, and must apply for re-registration, with full proof of their identity and of the genuineness of their diplomas. They must also pay a fee of two guineas. This necessity for re-registration is imposed so that the Council may be able to reject a certain number of persons now registered fraudulently, and also to strike out the names of dead men. A separate folio of the Register is reserved for unqualified persons who have been in practice in the colony for five years previously to the passing of the Act, provided that within two years of that passing they pass an examination in accordance with the regulations laid down in Schedule 3. Another class to be registered on a separate folio are those unqualified men who may be able to adduce proof that they have been in continuous and reputable practice for twenty-five years immediately anterior to the Bill becoming law. The Council has the power to refuse to register or to erase from the Register the name of any person who has been struck off the list of his college or off the Register of the United Kingdom, and the Council may, by a majority of two-thirds, investigate any charge of misdemeanour, felony, or disgraceful professional conduct, and visit the offending person with temporary or permanent punishment. An appeal is allowed to the person convicted to the High Court of Justice. The Senate of the Sydney University is constituted the examining body under the Act. The privileges of a registered practitioner are that he alone is eligible for Government appointments, and none but registered persons may sign death certificates and give medical evidence. Any person advertising as treating disease, injury, or ailment must place his Christian and surname in full in a conspicuous place on the house or premises to which such advertisement refers; and if unregistered he must add, "not registered under the Medical Act, 1891." The penalty for violation of this regulation is a fine of £50, or twelve months' imprisonment. Persons guilty of false registration or of falsely using the title of doctor, physician, surgeon, &c., shall be mulcted in a similar amount. The remainder of the Bill deals with administrative details. The obvious criticism of the Bill is that it is a jumble of absurdities and altogether reactionary in its provisions. The medical profession is entirely ignored, and the hive of quacks with which the colony swarms are given an opportunity of recognition by the State. The profession throughout the colony do not appear to take the slightest interest in the matter, and it is most probable that the democratic element in the Assembly will so mutilate the Bill that its own framers will scarcely recognise it.

Typhoid Fever in Melbourne.

Typhoid fever is very prevalent just now in Melbourne. The Board of Works, which was established last year, has up to the present done nothing in the direction of carrying out the sewerage system, for dealing with which it was specially created. The want of money is the reason of its supineness. A municipal loan of £2,000,000 is being floated for the purpose of draining Melbourne and suburbs, but the loan hangs fire. Meanwhile the people die. Dr. Greswell has been inquiring into the spread of typhoid fever amongst school children, and has made most astounding discoveries of filthy and insanitary arrangements in connexion with the State schools. After his recent investigations he asserted that from what he had seen of the want of the commonest rules of decency and hygiene amongst the Victorians the wonder was that there was not a great deal more typhoid fever.

Water Famine at Broken Hill.

The great silver mining centre Broken Hill has recently been entirely without water, and had it not been for the promptitude of the Government in having water sent by rail, disastrous consequences must have followed. As it is, business is disorganised, and some of the mines closed; typhoid fever is rife, and lead poisoning is rapidly on the increase. The quality of the water found in the neighbourhood of the town may be judged by the following analyses recently presented to the Premier of New South Wales by a deputation of residents of Broken Hill, who interviewed Mr. Dibbs on the question of starting a water scheme to supply the town with fresh water from the river Darling. Broken Hill is the mushroom city that has grown up quite recently on the silver fields, and now has a population of nearly forty thousand people, whose ordinary drinking-water has the following composition:—

Locality.	Total solidity, grains per gallon.	Chlorine, grains per gallon.	Albumen parts per million.			Lead.
			Free.	Fixed or albuminised.	Total.	
No. 3. Craven's Dam	125 grains	1·4	1·2	0·90	2·1	Trace
No. 4. Mellowship's Dam ..	70 grains	1·1	1·34	0·84	2·18	Trace
No. 5. Town Dam..	50 grains	0·5	1·5	1·0	2·5	Trace

Leprosy in New South Wales.

The Premier has laid upon the table of the Assembly the report of the Board of Health on leprosy in New South Wales during the year 1891. This has been compiled by Mr. Sagar, the secretary of the Health Department. In the course of his observations he points out that at the beginning of the year named thirteen lepers were under detention at the lazaret. During the year seventeen persons were notified to the Board as suspected to have leprosy. On examination seven were found to be ill of some other disease; ten were found to have leprosy—five of them were natives of New South Wales of European descent, four were Chinese, and one was from the Island of Tanna. One of the five whites died very soon after his discovery. The number remaining under detention on Dec. 31st, 1891, was twenty-one—one native of New South Wales of English descent, and one Chinese having died during the year. Eight of them were natives of New South Wales of European descent (six males, two females), eleven were Chinese, one a Javanese, and one a Kanaka. The total number of patients admitted since 1883 (when the lazaret was established) is thirty-one—namely: Natives of New South Wales nine, of whom one has died; nineteen Chinese, of whom eight have died; one half-caste from the West Indies, who was discharged in 1885, his sores having healed; one Javanese; and one Kanaka; total, thirty-one, of whom nine have died and one could not be detained. The male lepers are lodged in the establishment specially provided for them, which was described in the report on the subject dated May, 1891. In an appendix is a full account of the important facts regarding each of the patients of European descent. A summary, having reference to local distribution of the present series, shows that two patients are known to have been in communication with cases of leprosy; that, in connexion with the histories of cases near Mudgee and in Sydney, a Chinese leper was discovered during the present year at Mudgee; he had stayed there with his father on arriving in New South Wales twelve years ago, had lived there with his father during the year that preceded his arrest, and in the interval had lived and worked as a cabinet-maker in Sydney. Two other patients resided in widely separated neighbourhoods, but still in the same north-western district, where there is constant circulation of bush hands between the isolated sheep stations; but the patients themselves met for the first time at the lazaret. Thus the small series of cases here recorded furnish some slight hint of the contagiousness of leprosy.

Feb. 28th.

THE COLLEGE OF AGRICULTURE, DOWNTON.—The rebuilding of this college, rendered necessary by the destructive fire of last year, has now been so far completed that the premises will be ready for occupation and use next term.

Obituary.

DR. HENRY TOMKINS.

LAST week we announced the death of Dr. Henry Tomkins, medical officer of health for Leicestershire. The immediate cause of death was pneumonia, following on an attack of influenza. The deceased gentleman was a Doctor of Medicine of Queen's University, Dublin, a Bachelor of Science of Victoria University, Manchester, a Member of the Royal College of Surgeons of England, and a Licentiate of the Apothecaries' Society, London. His medical studies were pursued in Queen's College, Manchester Royal Infirmary, Queen's College, Belfast, and for shorter periods in the hospitals of London, Dublin, and Paris. He was successful in obtaining various scholarships and prizes, among them the Dunville and Turner scholarships at the Victoria University. In the year 1885 he was appointed to the important post of officer of health of the borough of Leicester, at a time when there was considerable attention being paid by the Town Council to the sanitary condition of the town. From among thirty-one candidates the committee of selection chose Dr. Tomkins. So well has his arduous work been performed that at their last meeting the Lord Mayor, on behalf of the Town Council, in describing his services, said: "The Council has sustained a serious loss in the death of its medical officer of health, Dr. Tomkins—a gentleman who had held the office for several years, who had in every department of his work shown exceptional ability, who held high professional qualifications, whose manners were always most agreeable, and who never spared himself in the discharge of the various duties, often most unpleasant, which fell upon him. The borough was singularly fortunate in securing the services of a gentleman of his high attainments, and still more fortunate in being able to retain him so long, when they knew that he had many temptations to go to other spheres. His value was recognised in the profession by his having been selected by THE LANCET as Special Commissioner to visit America at a time when the medical profession were gathered there for highly important discussion. He had now passed from among them, and the Council, he was sure, would not allow an event of the kind to take place without recording its sense of the loss, and its sympathy and condolence with the widow." This is a high but not an exaggerated tribute of praise. He has done a great deal for the borough of Leicester, in improving its sanitation, in cleansing the river, in procuring cleaner houses for the people, and in mitigating the diseases once so prevalent in the town. The completion of his work Dr. Tomkins, unfortunately, has not been spared to see. But he has left behind him many landmarks of sanitary progress in the right direction. His work as borough analyst was most enthusiastically carried out, as is evidenced in his last report to the Town Council. His contributions to medical literature were well known, and the columns of THE LANCET frequently contained communications from his pen. Of a quiet and unassuming disposition, as indeed all are who are conscious of power, he rendered himself widely known among his professional brethren by a combination of talent and industry; and he earned the esteem of the inhabitants among whom he laboured for his straightforward and unflinching advocacy of physiological and hygienic truths, and his endeavour to apply these to the amelioration of the sanitary condition of his fellow-citizens.

ESQUIRE DUKES, M.R.C.S. ENG., L.S.A.

MR. DUKES was born in Old Ford in 1813. He died on March 15th at Marquess-road, Canonbury. He was educated at Merchant Taylors' School, and subsequently at St. Thomas's Hospital. His first qualification, that of the Apothecaries, dates back to 1835, and he did not take the Membership of the College till 1860. His life was uneventful, but full of service and honourable work which secured for him the gratitude of his patients and the esteem of his professional neighbours. He joined the Hunterian Society in 1857, and was one of its vice-presidents. He worked hard till 1889, when he took into partnership Dr. Dewar. He leaves a son and four daughters.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

AT a quarterly meeting held on April 7th, the minutes of the ordinary meeting of the Council held on the 10th inst. were read and confirmed, with the exception of the resolution relating to the insurance of the two museums, in place of which an amended resolution of the Committee of General Purposes was accepted.

The death of Mr. Charles Hawkins, F.R.C.S., a past member of the Council, which took place on the 4th inst., was reported, and a vote of condolence with the sister, Miss Hawkins, was passed.

In pursuance of the report of the Museum Committee, the best thanks of the Council were given to Sir Arthur Douglas Brooke, Bart., for his presentation to the College of the valuable specimens of skeletons and skulls collected by his father, the late Sir Victor Brooke, Bart. The collection comprised fourteen skeletons, eighty-eight skulls, and seven crania.

The Council, having received no dissertation for the Jacksonian Prize of last year, agreed that the subject for this prize in the year 1893 be Hydrophobia. The consideration of the subject for the next Collegiate Triennial Prize was postponed.

From a report of the Laboratories Committee it appears that there are seventeen workers in the laboratories of the Colleges.

The Council, in pursuance of the notice in the summons, proceeded to the election of a member of the Court of Examiners in the vacancy occasioned by the resignation of Mr. W. M. Baker, and Mr. Howard Marsh was elected.

The President reported that, in pursuance of the provisions of the Bradshaw bequest, he had chosen Mr. Christopher Heath as the Bradshaw lecturer for the ensuing collegiate year, and that the lecture would be delivered at some convenient date in November or December, of which due notice would be given by circular to members of the Council.

The Council elected Mr. James Galloway, F.R.C.S., the Morton lecturer on Cancer and Cancerous Diseases for the ensuing collegiate year.

Mr. Jabez Thomas, M.R.C.S., Swansea, was elected a Fellow under Section 5 of the Charter of the 15th Victoria, relating to Members of twenty years' standing.

Medical News.

EXAMINING BOARD IN ENGLAND BY THE ROYAL COLLEGES OF PHYSICIANS AND SURGEONS.—The following gentlemen passed the Second Examination of the Board in the subjects indicated at a meeting of the Examiners on the 4th inst:—

Anatomy and Physiology.—Edward J. Lumb and Jeremiah S. A. Murphy, students of Yorkshire College, Leeds; George O. Rigby and William E. Tarbet, of University College, Liverpool; Thomas Salt, Edward A. B. Poole, Alex. W. Nuthall, and William P. Nicol, of Queen's College, Birmingham; William M. Willis, Edmund A. Dorrell, and Albert E. H. Pinch, of Bristol School of Medicine; Herbert J. Peel, John H. Bellamy, and Frank S. Hardy, of Sheffield School of Medicine; Albert L'Estrange Orme, of Trinity College, Dublin; Henry Roscoe, Francis J. Smith, and Francis S. Jackson, of Owens College, Manchester; William J. Woodman, of St. Mary's Hospital; William Davies, of St. Bartholomew's Hospital and Mr. Cooke's School of Anatomy and Physiology.

Anatomy only.—Walter G. Parkinson, William Archer, and William S. Dibbs, of Yorkshire College, Leeds; Henry J. Heginbotham, of Owens College, Manchester; Thomas W. W. Bovey, of Bristol School of Medicine; James R. Webb, of Melbourne University.

Physiology only.—John B. Chadwick, Alfred B. Steward, and Robert Marshall, of Owens College, Manchester; Walter M. Jackson, of University College, Liverpool.

(Six candidates were referred in both subjects; four in Anatomy only and six in Physiology only.)

Passed on the 5th inst.:—

Anatomy and Physiology.—Chas. W. Eames and Arthur P. Cummings, of Yorkshire College, Leeds; Charles Lamplough, James W. C. Barrett, Frederick G. Messiter, John C. Griffiths, Joseph Ganner, and Wm. McE. Clendinnen, of Queen's College, Birmingham; Thos. Gregory and Allen Whitfield, of Owens College, Manchester; Alfred H. Copeman, of St. Thomas's Hospital; Daniel S. Gerrish, of Bristol School of Medicine; John Wallace, of Queen's College, Belfast; Max Walthard, of Berne University; Ernest R. Rost, of St. Mary's Hospital; Francis G. Crookshank, of University College.

Anatomy only.—Arthur E. Little, Ernest E. Crowther, and Percy Kitchen, of Yorkshire College, Leeds; William H. Tomlinson, Jas. Worthington, Joseph Broadbent, Samuel Crossley, and Albert Hodge, of Owens College, Manchester; John W. Farndale and Edward J. E. Coop, of Queen's College, Birmingham; Charles E. Walker, of St. George's Hospital; John H. R. Pigeon, of Bristol School of Medicine; William C. Gent, of Bristol School of Medicine and Mr. Cooke's School of Anatomy and Physiology; Brian Watts, of Sheffield School of Medicine and Mr. Cooke's School of Anatomy and Physiology; Matthias Bailey, of University College, Liverpool; Percy Lyndon Moore, of Cambridge University and Mr. Cooke's School of Anatomy and Physiology.

Physiology only.—Richard G. Worger, of Bristol School of Medicine; John H. Busteed, of Guy's Hospital.

(Four candidates were referred in both subjects and fourteen in Physiology only.)

Passed on the 6th inst.:—

Anatomy and Physiology.—Godfrey J. R. Lowe, Edwin J. Toye, Ernest P. Turner, and Henry E. Thompson, of St. Bartholomew's Hospital; H. Fulham Turner, Ernest H. Van Someren, Alfred Salter, Henry J. F. Bourne, Stanley Copley, Thomas H. Green, Murray P. Jones, and James H. Horton, of Guy's Hospital; Arthur W. Jenkins, Arthur L. A. Webb, John Richards, Alfred Dimsey, Cecil Banting, and Courtnay C. Weeks, of University College; Edwin H. T. Nash, Maurice H. Laslett, Matthew J. H. Sayers, and Alfred L. Heme, of St. Thomas's Hospital; Matthew H. Raper and Edward J. Dobbin, of Middlesex Hospital; Henry W. Mills, of St. Thomas's Hospital and Edinburgh University; Sidney T. Reid, of Charing-cross Hospital.

Anatomy only.—Richard D. Stacy, of St. Bartholomew's Hospital; Leonard G. Reynolds, Stanley Rivers, and Thos. S. Biggs, of Guy's Hospital.

Physiology only.—Randolph L. Grosvenor, of St. Mary's Hospital; and Robert A. Pitter, of Middlesex Hospital.

(Six candidates were referred in both subjects; two in Anatomy only and eight in Physiology only.)

VICTORIA UNIVERSITY: FACULTY OF MEDICINE.—**The following candidates have satisfied the examiners:—**

Second M.B. Examination.

C. S. Ashe, Owens.	R. T. Hughes, Owens.
W. J. Bowden, ,,	A. W. Lilley, ,,
S. W. Brook, ,,	T. U. Mercer, University.
W. M. Brown, University.	Ernest Monks, Owens.
Archibald Brushfield, Owens.	Frank Radcliffe, ,,
W. W. Clemesha, ,,	J. H. Ray, ,,
T. S. Collin, ,,	J. F. Rimmer, ,,
N. F. Edwards, ,,	H. S. Smith, ,,
P. H. Fearnsides, Yorkshire.	W. L. Spink, Yorkshire.
F. W. Fish, Owens.	O. B. Trumper, ,,
J. W. Hainsworth, Yorkshire.	J. D. Whitaker, Owens.
J. P. Hall, Owens.	Philip Wilkinson, ,,
John Howe, ,,	

Final M.B. Examination (Part I.).

Reginald Alcock, Owens.	John Healey, Owens.
J. C. Bowden, University.	C. R. Jones, University.
H. C. Cadman, Owens.	W. McClelland, ,,
J. B. Carter, ,,	J. B. Mawdsley, ,,
J. H. Crocker, ,,	A. J. Partridge, ,,
W. E. Davies, University.	F. C. Scotson, Owens.
Arthur Greenhalgh, Owens.	F. J. Woods, University.

Final M.B. Examination (Part II.).

†A. E. Ash, Owens.	†E. C. McCarthy, Owens.
Arthur Bicknell, University.	†R. W. Marsden, ,,
*J. W. Crawshaw, Owens.	C. B. Taylor, ,,
A. J. Edwards, ,,	*J. H. Taylor, ,,
H. J. Lightbody, University.	†R. T. Turner, ,,
C. E. M. Lowe, Owens.	

* First Class Honours. † Second Class Honours.

UNIVERSITY OF ABERDEEN.—**The following candidates have received degrees in Medicine and Surgery:—**

Degree of M.D.—Charles G. Bennett, Buckie; Eber. Chambers, London; *Arthur R. Cushny, Fochabers; James S. Dickie, Bournemouth; Robert Eatough, Brindle; Charles T. Ewart, London; *James Galloway, London; Arthur C. Hutchings, Salisbury; William Machain, Blackburn; Archibald D. Mackinnon, Skye; Lindley M. Scott, Aberdeen; †Edgar Stevenson, Birkenhead.

* Highest Honours. † Commendation.

Degrees of M.B. and C.M.—Wm. M. Anderson, Aberdeen; Andrew Baxter, Aberdeen; Thos. Brander, Garmouth; Wm. J. Carmichael, Aberdeen; Arthur B. Dalgetty, Auchinblae; Navroji B. Darabseth, Bombay; §Andrew Davidson, Forres; Wm. R. Duguid, Buckie; Wm. J. S. Ewan, Fyvie; Duncan Finlayson, Tain; Alexander Forbes, Leochel-Cushnie; Alexander Fraser, Inverness; Thomas H. Galbraith, London; Alex. G. Gall, Melbourne; Alex. Grant, Dufftown; John W. Grant, Watten; Edward M. Griffiths, Ruthin, North Wales; Peter R. Ingram, Kildrummy; John R. Keith, Bridge of Allan; Robert E. Kerr, Bunchrew; Alex. Lamont, Ellon; John Leach, Ardersier; §Duncan D. Mackintosh, Aberdeen; William Moir, Forgue; Hugh Mowat, Banff; James Mowat, Auchnagatt; §Thos. W. Ogilvie, Aberdeen; John G. Pardoe, Littlehampton, Sussex; §Wm. R. Pirie, Aberdeen; William Ross, Fearn, Ross-shire; Wm. A. G. Russell, Orkney; §James Rust, Aberdeen; George Savege, Montrose; Charles R. Selnie, Pitcaple; Robert R. Sutter, Timaru, New Zealand; Andrew W. Thomson, Jamaica; ‡Wm. Trethowan, Victoria, Australia; Henry L. de Vos, Ceylon; James Wallace, Fearn, Ross-shire; Alfred Wilsden, Wooler, Northumberland; Robert Young, South Australia.

‡ Highest Honours. § Honourable Distinction.

George K. Gifford (Shetland) has passed the examinations for the degrees of M.B. and C.M., but will not graduate until he attains the necessary age.

Diploma in Public Health.—John T. Wilson, Glasgow (with credit).

ROYAL COLLEGES OF PHYSICIANS AND SURGEONS IN IRELAND: CONJOINT SCHEME.—**The following candidates have passed the Preliminary Examination:—**

J. J. Adrian, N. Beck, R. Brews, A. Eades, F. Heffernan, L. Jones, G. Kennedy, M. King, J. Martin, J. Morris, G. McDonald, J. Nesbitt, T. Neville, J. O'Connor, E. O'Farrell, G. Ross, H. Sheill, W. Yeming, and J. Whyte.

The following candidates have passed the Supplemental Examination in Physics:—

J. Barry, M. Cahill, D. Clarke, V. Connor, T. Cormack, E. Corselles, A. Faulkner, R. Hamilton, E. Heard, T. Martin, L. Mayston, T. Mullins, C. Odevaine, R. O'Donovan, P. O'Meara, B. Phillipson, and E. Siberry.

UNIVERSITY OF DUBLIN.—**The following prizes have been awarded for the winter session:**—*Anatomy:* **Senior Division—J. H. Morton, prize; Second Year, D. F. Walker, prize. Junior Division—Robert Friel, prize.** *Practice of Medicine:* **M. C. Carmichael, first prize; R. H. Kennan, second prize; F. Wynne, third prize.**

GREAT NORTHERN CENTRAL HOSPITAL.—**It has been decided by the committee of the hospital situate in the Holloway-road to erect the additional wing which will complete the new buildings, as a memorial to the late president of the institution, H.R.H. the Duke of Clarence and Avondale. Tenders for the work have been accepted, the cost of which, with the necessary furniture and fittings, will amount to about £30,000.**

HOSPITAL FOR WEST FIFE.—**At a special meeting of Inverkeithing Town Council on the 2nd ult., it was agreed to combine with the Burgh of Dunfermline and the Fife County Council in erecting a hospital for the treatment of infectious diseases. The terms on which the cost should be allocated have now been adjusted. It is proposed to provide from thirty to thirty-five beds, and the capital expenditure is estimated at £3000. A site at Milesmark, near Dunfermline, has been recommended.**

HASTINGS, ST. LEONARDS, AND EAST SUSSEX HOSPITAL.—**The annual report of the hospital, read at the annual meeting on the 8th ult., stated that 500 more patients had been treated than in the previous twelve months. As to the qualifications of physicians, the Rev. J. W. Tottenham moved the following resolution: "That an alteration be made in Rule 53, to the effect that after the words 'Fellow or Member of the Royal College of Physicians of London' be inserted 'Edinburgh or Dublin.'" A prolonged discussion ensued, the ultimate result being that the present rule should be maintained.**

METROPOLITAN OPEN SPACES.—**In the eighteen months during which the London County Council has maintained the gardens and churchyards handed over to it by the Metropolitan Public Gardens Association, £323 has been spent in various necessary works. There are eleven of these places, and it is estimated that £1694 will be required to put these additions into a condition similar to the other recreation grounds, if the Council decides to permanently take them over. The total acreage of parks and open spaces under the Council's control is 3121, and the cost for maintaining these last year was £56,668.**

ROYAL COLLEGE OF SURGEONS IN IRELAND: SCHOOLS OF SURGERY.—**The following is the prize list for the winter session 1891–92:**—*Descriptive Anatomy:* **Junior—George E. J. A. Robinson, first prize (£3 and medal); Charles Bagot Martin, second prize (£1 and certificate). Senior—Edward Joseph Moore, first prize (£3 and medal); Ernest Alexander Meeke, second prize (£1 and certificate).** *Practical Anatomy:* **First year—Joseph Richardson Sinton, first prize (£3 and medal); Francis Joseph Purcell, second prize (£1 and certificate). Second year—Asher Leventon, first prize (£3 and medal); Edward Joseph Moore, second prize (£1 and certificate). Third year—Hubert Rolston Sweeny, first prize (£3 and medal); Louis Francis Corbet, second prize (£1 and certificate).** *Practice of Medicine:* **William Taylor, first prize (£3 and medal); James Joseph O'Donnell, second prize (£1 and certificate).** *Theoretical Surgery:* **William Taylor, first prize (£3 and medal); Hubert Rolston Sweeny, second prize (£1 and certificate); Arthur McCann and James Jos. O'Donnell, certificates.** *Midwifery:* **William John Trewhella, first prize (£3 and medal); Myles D'Exeter Jordan, second prize (£1 and certificate).** *Physiology:* **William Ludgate Martin, first prize (£3 and medal); Edwin C. Hayes and Arthur McCann, second prize (£1 and certificate).** *Chemistry:* **Maurice J. Carroll and Edward W. Siberry (equal), first prize.**

MEDICAL APPOINTMENT TO COUNTY COUNCIL.—Mr. T. Woods, L.R.C.P. Lond., L.R.C.S.I., has been elected an alderman of the Dorsetshire County Council.

FOOTBALL CASUALTY.—During a Rugby match between the Liverpool Banks and the Liverpool Insurance Companies, played on the 30th ult. on the Old Boy's ground, Stanley, a young man sustained a fracture of the leg and was taken to the Royal Infirmary.

THE DRAINAGE OF THE LEA VALLEY.—A Select Committee of the House of Commons, presided over by Mr. Herbert Gladstone, have passed the Bill authorising the formation of a Board of Commissioners with power to effect the drainage of the lower portions of the Lea Valley, now subject to frequently recurring floods.

GIFT TO BIRMINGHAM.—Mr. Richard Cadbury has just formally handed over to the Mayor of Birmingham his late residence, Moseley Hall, which he has partly endowed, as a convalescent home for children. There is accommodation for 150 beds. The value of the gift with the donation to the endowment fund is estimated at £30,000.

CORONERS IN BOROUGHS.—Where owing to the death of the coroner of a borough a vacancy occurs in his office, it is proposed, in a Bill introduced by Sir A. Rollit, M.P., to empower the mayor of the borough to appoint a fit person to act as temporary coroner until the vacancy is filled by the council of the borough. In such cases the temporary coroner would have the same remuneration &c. as the ordinary coroner.

OPENING OF NEW HOSPITALS IN BOMBAY.—His Excellency the Governor, who was accompanied by Lady Harris and attended by Captain Nuthall, A.D.C., on March 17th performed the ceremony of formally opening the Sir Dinshaw Maneckjee Petit Hospital for Women and Children, the Bai Motlibai Obstetric Hospital, and the Dwarkadas Lalloobhoy Dispensary for Women and Children, the three new institutions lying off the Baboola Tank-road, and in close proximity to the Sir Jamsetjee Jejeebhoy Hospital.

NORTH-WEST LONDON HOSPITAL, KENTISH TOWN-ROAD.—The past year of this institution has been specially prosperous financially. The deficiency of the funds at the opening of the year gave much anxiety. Outstanding liabilities amounted to upwards of £2700, and the current expenditure for the year of not less than £3500 had to be provided. But Baron de Hirsch headed a list of subscriptions for £1000, and Mr. John Maple gave £100 on condition that twenty donations of a similar sum were forthcoming. The offer met with ready and satisfactory responses, and the work of the hospital has suffered no curtailment, but has increased.

POPLAR HOSPITAL FOR ACCIDENTS.—The thirty-seventh annual report shows that the usefulness of the charity had been satisfactorily maintained during the past year. The twelvemonth's receipts reached £8000, the largest sum received in any one year. This result is due to the special appeals made for additional funds. To meet the requirements of the honorary surgeons and the building committee for necessary improvements, plans were prepared and subsequently accepted, involving an outlay of £6088, and the work had been commenced and should be finished by November next. The amount subscribed does not permit the committee to erect the much-needed ward for women, which would enable them to complete the buildings. The cash statement shows a balance in hand of about £910 on the general fund.

PRESENTATION.—On the occasion of the members of the Infirmary Medical Superintendents' Society dining together with numerous friends at the Inns of Court Hotel, Holborn, on the 26th ult., advantage was taken to present Dr. John Henry Bridges, the medical inspector of the Local Government Board, with a silver salver and an illuminated address, subscribed for by the whole of the medical superintendents of the Metropolitan Poor-law infirmaries, as a mark of their appreciation of his courtesy in the discharge of his duties in connexion with the infirmaries, and of regret at his approaching retirement. Dr. Bridges, in an appreciative response, concluded by expressing his regret at the prospect of his active connexion with the infirmaries ceasing, but looked forward to his moral support continuing, and he felt sure that the members of the Society might look for the cordial support of the new head of the department, Dr. Thorne Thorne.

QUEEN'S HOSPITAL, BIRMINGHAM.—The annual report, just issued, shows a large increase in 1891 of the number of patients treated, which testifies to the growing importance and value of the charity to the city in its benevolent work. A wholesome improvement appears in the subscription list. The contribution from the Hospital Saturday collection had this year amounted to £1759 9s. 10d., the largest sum yet raised by that organisation on its behalf. The sanitary condition of the hospital was highly satisfactory, and the external nursing department had proved an important and valuable auxiliary.

METROPOLITAN ASYLUMS BOARD.

Return of Patients remaining in the several Fever Hospitals of the Board at Midnight on April 5th, 1892.

Hospital.	Beds occupied.						Total accommodation.
	Scarlet fever.	Diphtheria.	Typhus fever.	Enteric fever.	Other diseases.	Total	
Eastern Hospital	196*	64	..	20	..	280	442
North-Western Hospital	182	46	..	10	4	242	411
Western ,,	106	21	..	1	3	131	224
South-Western ,,	197	41	..	8	..	246	350
South-Eastern ,,	231*	13	..	26	1	271	424
Northern ,,	314	25	..	8	..	347	480
Totals	1226	210	..	73	8	1517	2331

* Infant with mother.

SMALL-POX.—*Atlas* hospital ship, 38.

MEDICAL NOTES IN PARLIAMENT.

Smoke Nuisance (Metropolis) Bill.

IN the House of Lords, on Thursday, March 31st, the House went into Committee on this Bill, which, after some consideration, was reported to the House, and afterwards referred to the Standing Committee.

The Water-supply of London.

In the House of Commons, on Friday, in answer to a requisition by Sir R. Temple desiring the names of one or two influential residents in Surrey to be added to the Commission, Mr. Ritchie replied that the question of the constitution of the committee had been very carefully considered. The Government could not accede to the suggestion of his hon. friend.

Yellow Fever on Transports.

In answer to Mr. Leighton, Mr. Brodrick said two cases of yellow fever occurred during the voyage of the *Atlas* to Halifax; and since arrival one case had been sent to the hospital. The percentage of sick to strength among the white troops at St. Lucia had been fairly constant since the increase of the garrison, and it had averaged 9·9 per cent.

Fever among the Royal Horse Guards.

In the House of Lords on Thursday, the 7th inst., the Earl of Arra gave notice that he will ask the Government how many cases of typhoid fever have occurred among the officers of the Royal Horse Guards (the Blues) since August last, whether any examination has been made by the military or other medical or sanitary authorities during the past year of the barracks and quarters occupied by the Royal Horse Guards up to April 5th, 1892, and whether there is any objection to lay these reports, if any have been made, on the table o the House. The question will be addressed to the Government soon after the reassembling of the House of Lords.

Queen's College, Belfast.

In the House of Commons on Thursday Mr. Sexton asked the Chief Secretary to the Lord-Lieutenant of Ireland what steps had been taken to provide the medical students of Queen's College, Belfast, with a summer session for dissection.—Mr. Jackson replied that he did not know that any application for a summer session in anatomy had been made to the authorities of the College, but he was aware that the President did not consider such a session necessary.—Dr. Tanner asked whether the right hon. gentleman was aware that summer sessions were quite ordinary.—Mr. Jackson: Yes, sir; but not necessary.

The Colour Vision Committee.

Sir Henry Roscoe asked the President of the Board of Trade whether he could state when the report of the Colour Vision Committee, appointed at his request by the Royal Society, would be laid upon the table of the House.—Sir M. Hicks Beach replied that the Chairman of the Committee expected to be able to report to the Royal Society at the end of the present month. As soon as the report reached him (Sir M. Hicks Beach) he would lose no time in laying it on the table.

The National Vaccine Establishment.

Mr. Summers asked the President of the Local Government Board whether he was aware that the humanised lymph distributed from the National Vaccine Establishment, which was derived from various public vaccinators throughout the country, had been found, on examination, to vary greatly in quality, and, in some cases, from 60 to 70 per cent. of

the tubes had, upon microscopic examination by Mr. Farn, the official examiner of vaccine lymph, been rejected as unfit for use; and whether, in view of these facts, he would advise that no lymph should be used for public vaccination unless it had been first submitted to official microscopical examination.—Mr. Ritchie: As I very recently informed the honourable member, in reply to a question by him, the only humanised lymph distributed by the National Vaccine Establishment which is not microscopically examined is that supplied on points, and this lymph is exclusively furnished to the Department by their own officers, who themselves have carefully taken the lymph. I see no reason to advise a change in the existing arrangements as to the lymph for public vaccinations.

Scurvy among Sailors.

In reply to a question by Colonel Hill, Sir M. Hicks Beach said that returns on the subject of the health of crews of ships were presented to Parliament in 1876, 1879, and 1883. Since then there had been a great decrease in the number of outbreaks of scurvy, the number reported diminishing from 99 in 1881 to 13 in 1891. He was glad to be able to add that these outbreaks had diminished in severity as well as in number.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.*

ARBUCKLE, JOHN H., M.D., C.M., S.Sc.Cert. Camb., has been appointed Medical Officer in Criminal Investigations in the Kilmarnock District of the county of Ayr.

BODMER, R., F.C.S., F.I.C., has been reappointed Public Analyst for the Bermondsey Local Board.

BURNET, R. W., M.D., has been appointed Honorary Consulting Physician to the Royal Caledonian Asylum, Holloway, N., vice D. W. Finlay, M.D., resigned.

CHEYNE, WM. WATSON, M.B., has been appointed Honorary Consulting Surgeon to the Royal Caledonian Asylum, Holloway, N., vice J. Wood, F.R.C.S., deceased.

CLARKSON, R. D., M.B., C.M. Edin., has been appointed Resident Physician to the Royal Edinburgh Hospital for Sick Children.

COTTERELL, EDWARD, F.R.C.S., has been appointed Surgeon to the Cancer Hospital, and Surgeon to the West-End Hospital for Nervous Diseases.

DEEPING, G. D., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Prittlewell Sanitary District of the Rochford Union.

DOWDEN, J. W., M.B., C.M. Edin., has been appointed Resident Physician at the Royal Edinburgh Hospital for Sick Children.

ENGLISH, J., L.R.C.P., L.R.C.S. Edin., has been appointed Medical Officer to the Yass Hospital, New South Wales.

FISHER, J. A., L.F.P.S. Glasg., L.R.C.P. Edin., has been reappointed Medical Officer of Health for Garston.

FRANKISH, THOS., M.B., C.M. Edin., has been appointed Dispensary Surgeon to the Bradford Infirmary, vice Milligan.

HARRIS, THOS., M.D. Lond., M.R.C.P., M.R.C.S., has been appointed Honorary Physician to the Manchester Royal Infirmary, vice Ross.

HAYDON, F. E., M.B. Glasg., L.R.C.P., L.R.C.S. Edin., has been appointed Medical Officer of Health for the Littlehampton Port Sanitary Authority, East Preston Union.

HENDERSON, D., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Medical Officer for the Bilston, No. 5, Sanitary District of the Wolverhampton Union.

HORROCKS, W., F.R.C.S., has been appointed Honorary Surgeon to the Bradford Infirmary, vice Dr. Rabagliati.

JONES, J. R., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Medical Officer for the Penrhyndendraeth Sanitary District and the Workhouse of the Festiniog Union.

KIRTON, C. S., M.R.C.S., L.R.C.P. Lond., has been appointed Medical Officer for the Leigh Sanitary District of the Rochford Union.

LEES, C. F., M.B., C.M. Edin., has been appointed Assistant Medical Officer at the Hope Hospital, Manchester.

MAC CARTHY, W. F., M.B., B.Ch. Dub., has been appointed Medical Officer for the Sanitary District of Powick, Malvern Union.

MILLIGAN, H. N. D., M.B., C.M. Edin., has been appointed Junior House Surgeon to the Bradford Infirmary, vice H. B. Kitchin.

MORRIS, W. J., L.R.C.P. Edin., M.R.C.S., has been appointed Medical Officer for the Tremadoc Sanitary District of the Festiniog Union.

MORRISON, J. T. J., M.A., B.C. Cantab., F.R.C.S. Eng., has been appointed Central Divisional Surgeon to the Birmingham Police Force and Fire Brigade.

MULVANY, JOHN, M.R.C.S., L.R.C.P. Lond., has been appointed House Surgeon to the Cottage Hospital, Walsall.

MUNDEN, CHAS., M.R.C.S., has been appointed Medical Officer for the Ilminster Sanitary District of the Chard Union.

PARTRIDGE, THOS., M.R.C.P. Irel., M.R.C.S., has been reappointed Medical Officer of Health for the Stroud Rural Sanitary District.

RICHARDSON, W. J., M.R.C.S., L.R.C.P. Lond., has been appointed Medical Officer to the Brentford Post-office.

ROBERTS, EDWD. C., M.R.C.S., has been reappointed Medical Officer of Health, Southgate, N.

ROBERTS, J. S. H., L.R.C.P. Lond., M.R.C.S., has been appointed Surgeon to the Swansea Hospital, vice Knight.

ROBINSON, FRANK, M.B., Ch.B., has been appointed Assistant Medical Officer to the Workhouse Infirmary, Crumpsall, and Resident Assistant Medical Officer to the Casual and Receiving Wards, New Bridge-street, Manchester.

SWABY-SMITH, C., M.R.C.P. Ed., M.R.C.S., L.S.A., has been appointed Senior Medical Officer to the First Surrey Rifles.

THANE, P. T., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer to the Yass Hospital, New South Wales.

WILLETT, EDGAR, M.B., F.R.C.S., has been appointed Assistant Surgeon to the Metropolitan Hospital, Kingsland-road.

WILLIAMS, HENRY W., M.D. Aberd., L.R.C.P. Edin., L.F.P.S. Glasg., has been appointed Consulting Physician to the Dalrymple Home for Inebriety, vice Carpenter, deceased.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement.

ASTON UNION.—Resident Assistant Medical Officer at the Workhouse, Erdington, near Birmingham. Salary £100 per annum, with furnished apartments, rations, washing, &c. (Apply to the Clerk, Union Offices, Vauxhall-road, Birmingham.)

CHESHIRE COUNTY ASYLUM, Macclesfield.—Senior Assistant Medical Officer. Salary to commence at £150 per annum, with board (no beer), apartments, &c.

CUMBERLAND INFIRMARY, Carlisle.—House Surgeon for one year. Salary £70 per annum, with board, lodging, and washing.

HASTINGS, ST. LEONARDS, AND EAST SUSSEX HOSPITAL, Hastings.—House Surgeon. Salary £75 per annum, with board and residence in the hospital.

KILBURN, MAIDA VALE, AND ST. JOHN'S WOOD GENERAL DISPENSARY.—Vacancy in the Honorary Medical Staff. (Apply to the Honorary Secretary, 13, Kilburn-park-road, N.W.)

LEWES DISPENSARY AND INFIRMARY AND VICTORIA HOSPITAL.—Resident Medical Officer. Salary £100 per annum, furnished apartments, coal, gas, and attendance.

LONDON LOCK HOSPITAL AND ASYLUM, Harrow-road, and 91, Dean-street, Soho.—Surgeon to Out-patients. (Apply to the Secretary, 91, Dean-street, Soho.)

MANCHESTER ROYAL INFIRMARY, DISPENSARY, AND LUNATIC HOSPITAL OR ASYLUM.—Honorary Assistant Physician.

MANCHESTER SOUTHERN AND MATERNITY HOSPITAL.—Resident House Surgeon. Honorarium at the rate of £75 per annum.

METROPOLITAN HOSPITAL, Kingsland-road.—House Physician, House Surgeon, and Assistant House Surgeon, for six months. In addition to board and laundry expenses, the House Physician and House Surgeon will each receive a salary at the rate of £60 per annum.

NORTH RIDING ASYLUM, Clifton, York.—Second Assistant Medical Officer. Salary £100 a year. Board, apartments, washing, and attendance.

NOTTINGHAM BOROUGH ASYLUM.—Assistant Medical Officer. Salary £125 per annum, with apartments, board, and washing.

PARISH OF BIRMINGHAM.—Three Visiting Physicians for the Workhouse Infirmary. Salary £100 a year. (Apply to the Clerk, Parish Offices, Edmund-street, Birmingham.)

SEAMEN'S HOSPITAL SOCIETY, Greenwich.—Visiting Physician for the Branch Hospital in the Royal Victoria and Albert Docks.

SEAMEN'S HOSPITAL SOCIETY, Greenwich.—Visiting Ophthalmic Surgeon.

ST. GEORGE-THE-MARTYR, Southwark.—Medical Officer of Health. Salary £500 per annum. (Apply to the Vestry Clerk, Vestry Hall, Borough-road, S.E.)

UNIVERSITY COLLEGE, London.—Resident Medical Officer in the hospital.

Births, Marriages, and Deaths.

BIRTHS.

ACKLAND.—On March 29th, at Stowford House, Bideford, the wife of C. Kingsley Ackland, L.R.C.P. Lond., of a daughter.

DUNCAN.—On April 6th, at Park House, Croydon, the wife of P. T. Duncan, M.D. Lond., of a daughter.

EMERSON.—On March 29th, at Talgarth-road, West Kensington, the wife of Surgeon-Major G. A. Emerson, I.M.D., of a son.

GOODING.—On April 5th, at Bridge'and-street, Bideford, N. Devon, the wife of M. R. Gooding, L.R.C.P. Lond., M.R.C.S. Eng., of a son.

HARDING.—On March 29th, at Elmsleigh Moat-Croft-road, Eastbourne, the wife of C. O'Brien Harding, M.R.C.S., L.R.C.P. Lond., of a daughter.

TOLLER.—On April 1st, at Castle House, Ilfracombe, the wife of Charles W. E. Toller, M.B. (Durh.), of a daughter.

MARRIAGES.

GROOME—DIXON.—On April 6th, at St. Peter's Church, Brockley, Walter Groome, M.B., M.S., son of John Groome, Esq., of Ellesmere Park, Eccles, to Edith Maria, youngest daughter of John Dixon, Esq., of Lenten House, Brockley, Kent.

MOON—BRADSHAW.—On March 1st, at Christ Church, Rawal Pindi, Punjab, by the Rev. A. N. W. Spens, Senior Chaplain, Wilfred Granam, Captain Seaforth Highlanders, third son of the Rev. Sir Edward Graham Moon, Bart., Rector of Fetcham, Leatherhead, Surrey, to Mary Frances, second daughter of Surgeon-Colonel A. F. Bradshaw, C.B., Army Medical Staff, Honorary Surgeon to his Excellency the Viceroy of India.

MORRIS—HALLETT.—On April 2nd, at St. Margaret's, Westminster, Henry Cecil Low Morris, L.R.C.P., M.R.C.S., Hambleden, Henley-on-Thames, to Emily Beatrice, youngest daughter of the late Joseph Hallett, of Sunningdale, Thornton-heath.

DEATHS.

CATTY.—On April 3rd, at Meadow Lodge, Cambridge-park, Twickenham, Frederic Adam Catty, F.R.C.S., formerly of Guildhall, London, aged 89.

HAWKINS.—On April 4th, at Duke-street, Portland-place, Charles Hawkins, F.R.C.S., in his 80th year.

SARGENT.—On April 1st, in London, of pneumonia, Henry Edwin Sargent, M.D., M.R.C.S.E., L.S.A., formerly of Polyphant, near Launceston, Cornwall, aged 63 years.

SPOONER.—On April 2nd, at 15, Victoria-road, Brighton, Chas. Henry Spooner, M.R.C.S., aged 76.

N.B.—A fee of 5s. is charged for the Insertion of Notices of Births, Marriages, and Deaths.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, April 7th, 1892

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radia in Vacuo.	Maximum Temp. Shade.	Min. Temp	Rainfall.	Remarks at 8.30 A.M.
April 1	30·47	S.	41	37	84	67	37	—	Hazy
" 2	30·42	S.E.	48	43	108	67	40	—	Hazy
" 3	30·35	N.E.	53	48	114	67	41	..	Bright
" 4	30·07	S.	50	46	105	74	43	..	Foggy
" 5	29·98	S.	56	51	110	74	48	..	Hazy
" 6	29·96	S.E.	56	50	104	71	50	..	Hazy
" 7	29·93	E.	52	47	107	66	45	..	Hazy

Medical Diary for the ensuing Week.

Monday, April 11.

ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1.30 P.M., and on Tuesday, Wednesday, Friday, and Saturday at the same hour.
ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations daily at 10 A.M.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1.30 P.M., and each day at the same hour.
CHELSEA HOSPITAL FOR WOMEN.—Operations, 2.30 P.M.; Thursday, 2.30.
HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M., and on Thursday at the same hour.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and each day in the week at the same hour.
UNIVERSITY COLLEGE HOSPITAL.—Ear and Throat Department, 9 A.M.; Thursday, 9 A.M.
MEDICAL SOCIETY OF LONDON.—8.30 P.M. Clinical Evening. Mr. Watson Cheyne: A case of Removal of the Breast treated by Thiersch's Method of Skin Grafting.—Mr. Harrison Cripps: (1) A case of Chancre of Face; (2) A case illustrating Amputation of the Penis by a Perineal Method.—Mr. Hugh Smith: A Preparation of the Parts from a case of Unreduced Dislocation of the Shoulder, with Clinical History.—Dr. T. Colcott Fox: Two cases illustrating the Development of Lupus Vulgaris from Scrofulous Glands and Scrofulous Gummata.—Dr. W. Pasteur: Pigmentation of Mucous Membrane of Mouth and Gums. Cases will also be shown by Dr. Mitchell Bruce and Mr. Sheild. Mr. Brudenell Carter will show at the commencement of the meeting an instrument for facilitating the performance of Mules's operation. By the President: (1) A Specimen of Plugging of the Duodenum from a Lamb; (2) Infective or Melanotic Freckles in Senility (portrait).

Tuesday, April 12.

KING'S COLLEGE HOSPITAL.—Operations, 2 P.M.; Fridays and Saturdays at the same hour.
GUY'S HOSPITAL.—Operations, 1.30 P.M., and on Friday at same hour. Ophthalmic Operations on Monday at 1.30 and Thursday at 2 P.M.
ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 4 P.M.; Friday, 2 P.M.
ST. MARK'S HOSPITAL.—Operations, 2 P.M.
CANCER HOSPITAL, BROMPTON.—Operations, 2 P.M.; Saturday, 2 P.M.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 2.30 P.M.
ST. MARY'S HOSPITAL.—Operations, 1.30 P.M. Consultations, Monday, 2.30 P.M. Skin Department, Monday and Thursday, 9.30 A.M. Throat Department, Tuesdays and Fridays, 1.30 P.M. Electro-therapeutics, same day, 2 P.M.
THE QUEEN'S COLLEGE, BIRMINGHAM.—4 P.M. Dr. Arthur Foxwell: The Condition and Treatment of the Vascular System in Chlorosis and other Debilitated States. (Ingleby Lecture.)
ROYAL MEDICAL AND CHIRURGICAL SOCIETY.—Mr. Rickman John Godlee: A case of Ligature of the Second Part of the Left Subclavian Artery for the Cure of an Axillary Aneurysm.—Dr. George Thin: On the Symptoms and Pathology of Psilosis (Linguæ et Intestini).

Wednesday, April 13.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.
MIDDLESEX HOSPITAL.—Operations, 1.30 P.M.; Saturdays, 2 P.M. Obstetrical Operations, Thursdays, 2 P.M.
CHARING-CROSS HOSTITAL.—Operations, 3 P.M., and on Thursday and Friday at the same hour.
ST. THOMAS'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour.
LONDON HOSPITAL.—Operations, 2 P.M.; Thursday & Saturday, same hour.
ST. PETER'S HOSPITAL, COVENT-GARDEN.—Operations, 2 P.M.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2.30 P.M.
GREAT NORTHERN CENTRAL HOSPITAL.—Operations, 2 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 1.30 P.M.; Skin Department, 1.45 P.M.; Saturday, 9.15 A.M.
ROYAL FREE HOSPITAL.—Operations, 2 P.M., and on Saturday.
CHILDREN'S HOSPITAL, GREAT ORMOND-STREET.—Operations, 9.30 A.M. Surgical Visits on Wednesday and Saturday at 9.15 A.M.
HUNTERIAN SOCIETY.—8.30 P.M. The President: A case of Acromegaly. Dr. T. Marshall: A case of Local Sweating of Face.—Dr. Jas. Galloway: A case of Morphœa undergoing Resolution.—Mr. J. Poland: A large Adeno-fibroma of the Breast.—Dr. A. T. Davies: (1) A case of Myxœdema; (2) A case of Transposition of the Viscera.

Thursday, April 14.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M. Surgical Consultations, Wednesday, 1.30 P.M. Ophthalmic Operations, Friday, 1.30 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; Ear and Throat Department, 9 A.M.

Friday, April 15.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

Saturday, April 16.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; and Skin Department, 9.15 A.M.

Notes, Short Comments, & Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.
All communications relating to the editorial business of the journal must be addressed "To the Editors."
Lectures, original articles, and reports should be written on one side only of the paper.
Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.
We cannot prescribe or recommend practitioners.
Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."
Letters relating to the publication, sale, and advertising departments of THE LANCET *to be addressed "To the Publisher."*
We cannot undertake to return MSS. not used.

A WARNING.

IT has come to our knowledge during the last few days that a preparation of a chemical nature has been advertised with the name of this journal as part of its trade title. We need hardly say that we have forbidden the use of the name of THE LANCET for the purpose indicated, and our readers will be assured that in no case has any company, firm, or individual the right, either expressed or implied, to use the name of THE LANCET, or the word "Lancet," as part of the trade title of any article, compound, or substance whatsoever.

PRISMETRY.

Mr. Dixey, the well-known optician, addresses to us a letter in which he expresses his opinion that instead of numbering prisms according to the angle of inclination of the sides, as now commonly practised, it would be well if ophthalmic surgeons would adopt the notation recommended by Dr. Maddox in his work on Prisms, in which the angle of deviation of a ray of light passing through the prism is taken as the basis. Mr. Dixey points out very justly that the present method is very unsatisfactory, in view of the different materials of which spectacle lenses are made, such as pebbles and tinted and plain glass, and that the method of numeration suggested by Dr. Maddox is much more scientific, and will certainly lead to more satisfactory results when the optician carries out the directions of the ophthalmic surgeon. In this view we are in complete accord with Mr. Dixey.

Cestrian.—1. The degree is registrable only as an additional qualification.—2. Yes.—3. Information is given in our Students' Number published in September last; or application might be made to the Secretary of the Brussels Medical Graduates' Association, Dr. Steele, 3, Hamilton-road, Ealing, W.

Dr. Fred. J. Smith.—We can, obviously, undertake the analysis o cigarette papers only in cases where there is reason to suspect their innocuousness.

J. D. F.—Messrs. Leggott and Marsh, Market-street, Bradford.

AN INTERESTING DOCUMENT.

To the Editors of THE LANCET.

SIRS,—As much has been said lately about Sir Provo Wallis, the survivor for so long of the action between the *Chesapeake* and the *Shannon*, I send you a copy of a document in my possession, which will give your readers the name of the surgeon of the *Shannon*; and as possibly someone of his descendants may be in our profession, it may interest them to know that his name is preserved along with that of Sir Provo Wallis in my collection of autographs.

"These are to certify the Directors of the Chest at Greenwich that Peter Van Loo, quality L.M., was wounded on board His Majesty's ship *Shannon* by receiving a splinter wound on the left shoulder, removing the integuments for a great extent, on the first day of June, One thousand eight hundred and thirteen, being then actually upon His Majesty's service in engagement with the United States Frigate *Chesapeake*. Aged about 21 years. Born at or near Oldenburgh, Germany.

"P. B. V. BROKE, Captain. | PROVO W. P. WALLIS, Lieutenant.
— GOUGH (?), Master. | ALEX. JACK, Surgeon."

The name of the master is, I think, Gough; but it is so indistinctly written that I cannot well make it out. Can any of your readers help me?

I am, Sirs, yours truly,
Peterborough, March 29th, 1892. W. EASBY, M.D.

PUBLIC ADVERTISEMENTS AND THE SHEFFIELD PUBLIC HOSPITAL.

WE are asked our opinion on the applications of candidates for the office of Honorary Surgeon in the Sheffield Public Hospital and Dispensary advertised in the *Sheffield and Rotherham Independent*. It is permitted, of course, for a candidate for such an office to lay before the governors a statement of the facts on which he grounds his claim to be appointed. But we think that the particulars of such claims should be given by circular or private communication to governors, and not in newspaper columns. The use of the latter medium has the appearance of an appeal to the public rather than to the governors of the institution.

E. R. H. (Birmingham).—1. The coroner is at liberty to order whom he pleases to make a post-mortem examination. A previous medical attendant should be informed of the arrangements for a necropsy, and invited to be present by the gentleman ordered to make it. We are not aware that the coroner has any power to forbid the presence of the medical attendant.—2. The first part of the second question does not admit of a definite reply without fuller particulars being given. The second part of the question admits only of an affirmative answer.

Rufus.—We regret we cannot supply the information, which might possibly be obtained from the firm named by our correspondent.

Mr. W. G. Percy (Brainerd, Minn.).—Almost any good dictionary will give the information.

Dr. M'Dougal (Cannes).—The paper will appear very shortly.

"'TOUTING' IN HALIFAX."

To the Editors of THE LANCET.

SIRS,—In your issue of April 2nd, under the above heading, "Fair Play" makes certain statements that are undoubtedly misleading to your readers. He says that at the Halifax Provident Dispensary no wage limit exists. Now, this is in one sense quite correct; but your correspondent omits to state that though no wage limit is fixed, yet every intending member's name goes before the committee and medical staff, who exercise their own discretion as to the eligibility of the applicant, and if in their opinion he can remunerate a private practitioner in the ordinary way, the application is not accepted. I may say the committee have already refused many such applications. As to the charge of "touting," it is, of course, impossible to conduct any co-operative system without canvassing. The Halifax Provident Dispensary, however, is not a professional organisation, but one which works on public lines, and "touting" is not a fair expression to be applied to its method. Moreover, as your correspondent must know, there are probably hundreds of dispensaries and schemes for medical aid in operation which are equally open to the complaint. Indeed, in many cases it could be made with much greater reason, since dispensaries have been established by medical men for their own benefit, and to canvassing in these cases the charge of "touting" may more fairly be applied. As to the question of remuneration of medical men, I venture to think the allusion of your correspondent is equally unfair. Our scale of charges is practically the same as that of the Leicester Dispensary (which has 35,000 members and a staff of twenty-two medical officers), and it is more favourable to medical men than the scales of many provident institutions. But it is also the fact that medical gentlemen in Halifax cater to supply the members of friendly societies with advice, attendance, and medicine at from 1s. 9d. to 2s. 6d. each per annum, whilst the Halifax Provident Dispensary charges an entrance fee and 3s. 6d. per member per annum. If space permitted, I could quote other facts, which would doubtless occasion surprise to some of your readers; but I think what I have already said will show that your correspondent's attack on our institution is both unfair and uncalled-for. I enclose you a copy of our rules, and hope you will kindly insert this letter in your next issue.

I am, Sirs, yours respectfully,

F. M. BATLEY,

April, 1892. Secretary, Halifax Provident Dispensary.

PTYALISM.

To the Editors of THE LANCET.

SIRS,—I should be glad of any suggestions as to treatment of the following case.

An old lady seventy-five years of age is the subject of a most troublesome salivation. During sleep and when awake the flow is constant. It began about twelve months ago, and has resisted all treatment by astringents, belladonna, regulation of diet, &c. All the teeth are gone, and no false ones are worn. There is, and has been, no tenderness of the salivary glands, and, except for the constant annoyance, no apparent depreciation of the general health. Appetite good, and digestive functions satisfactory. I am, Sirs, yours faithfully,

April, 1892. M.B., C.M.

TATTOO MARKS.

To the Editors of THE LANCET.

SIRS,—Having some ordinary blue Indian ink tattoo marks on one of my hands, the result of a boyish freak, and which are more noticeable than elegant, might I ask any of your readers if they could recommend me a fairly certain mode of extirpation short of actual excision of the skin? I am, Sirs, yours faithfully,

March 10th, 1892. M.B., C.M.

THE MALARIAL ORIGIN OF PERIODIC OPHTHALMIA OF HORSES.

DR. T. POTAPENKO, who has been in Russian cavalry regiments for several years, communicates to the *Vrach* some remarks on the periodic ophthalmia of horses which appears to be of malarial origin; for on examining the blood of affected animals he invariably found both within and without the red corpuscles micro-organisms which, from their microscopical characters and their characteristic staining, appeared to be identical with the plasmodia found in the blood in malarial fever in the human subject. These bodies were never found in the blood of horses not affected with periodic ophthalmia. In corroboration of this view Dr. Potapenko mentions that the affection generally occurred when the horses were pastured in low-lying marshy lands, wet spring and autumn being more favourable than dry seasons.

Mr. T. Greaves Walker.—We have perused the correspondence sent to us. It is gratifying to notice the obvious personal courtesy on both sides. Our correspondent has some reason to complain of the way in which the consultation was arranged without conference with himself. But we could wish that, for the sake of the patient and the avoidance of an appearance of want of professional harmony, he had met the consultant and continued in charge of the case. It is hopeless to expect perfect consideration to medical feeling, especially in complicated circumstances, and in the height of an acute illness. The action of the consultant here, as well as the interest of the patient, made it right to subordinate private feeling, at least till the case was over. Thereafter the practitioner in attendance might have expressed his dissatisfaction to the master of his patient.

Mr. Fred. J. Green.—The Beaufort leg, manufactured by Mr. Schramm, of Princes-street, Cavendish square, would probably meet the requirement of our correspondent.

B. F. will find the information he desires in our Students' Number, published Sept. 6th last.

M.R.C.S. Eng. and *M.D.* (Nice) have forgotten to enclose their cards.

Mr. P. T. Wyman.—We are unable to entertain the proposal.

ALLEGED OFFICIOUSNESS OF A MEDICAL OFFICER OF HEALTH.

To the Editors of THE LANCET.

SIRS,—Would you kindly give publicity to the following facts in your next issue?

On the 28th ult. I was called to see a patient, and, diagnosing the case as one of diphtheria, I duly notified it as such. To my astonishment, on paying my usual visit on the 2nd inst., I found that the medical officer of health had been to the house, examined the patient, and gratuitously expressed his opinion to the relatives that there were no symptoms of diphtheria, and that the patient had not had, and was not suffering from, that disease. On meeting the medical officer of health an hour or two later I referred to the circumstance, only to be further nonplussed by his assertion that "he had only done his duty." He then turned and left me while I was still speaking to him. On the 3rd inst. I had the independent opinion (after a careful examination of the case) of a medical practitioner of standing and experience, who verified my diagnosis, and expressed his willingness to give further testimony, if need be, to its accuracy. This gentleman found the following symptoms:—Two patches of diphtheritic membrane and excoriations in the throat left by sloughing, enlargement of glands in cervical region, and partial paralysis of soft palate with the resulting nasal voice.

Now, Sirs, I would wish you or some member of the profession to let me know what a medical officer of health's duties are. Courtesy and tact surely are essential, whereas interference with a medical man's patients and criticism of his diagnosis seem to contravene both. Have instances such as the above been brought under the notice of the Local Government Board, and if so, with what result?

I am, Sirs, yours faithfully,

GEO. MCM. BROWN, M.B., C.M.Edin.

Tunstall, Staffs., April 4th, 1892.

*** If the above statement, which is of course *ex parte*, is correct, the interference of the medical officer of health was most reprehensible. Such action would paralyse the whole notification system, which throws on the medical attendant the responsibility of the diagnosis. No medical officer of health will, on reflection, undertake to act as a sort of detective to a practitioner in matters of diagnosis.—ED. L.

"ORIGINAL WORK AND GENERAL PRACTICE."

To the Editors of THE LANCET.

SIRS,—In the direction of original work suggested by your correspondent, I would propose that post-mortem rooms of the general hospitals should be understood to be accessible to general practitioners. How greatly this would help to increase our facilities for observation and, directly bear on our practice is obvious, especially in these days, when coroners often limit post-mortem examinations to an extent prejudicial to the public safety, as well as to the highest interests of the medical profession. I am, Sirs, yours truly,

April, 1892. ANOTHER GENERAL PRACTITIONER.

OPHTHALMIC CASE-BOOK.

WE have received a specimen page of a case-book for ophthalmic cases in general practice, printed for Dr. A. Maude, Westerham, by Messrs. Hooker and Sons, Westerham. It presents no particularly new feature, but will prove useful to ophthalmic surgeons.

Candidate.—Jervis on the Office and Duties of Coroners, of which several editions have appeared, published by Stevens and Sons, Chancery-lane.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

COMMUNICATIONS, LETTERS, &c., have been received from—Dr. J. W. Allan, Glasgow; Lieut.-Col. Allsopp, London; Messrs. Anderson and Co., London; Mr. J. M. Atkinson, Hong Kong; Messrs. Boulton and Paul, Norwich; Dr. G. McM. Brown, Tunstall; Messrs. Burgoyne and Co., London; Mr. T. B. Browne, London; Messrs. Battley and Watts, London; Mr. Butlin, London; Dr. Berslay, Esher; Mr. Brice, Bridgwater; Mr. Barwell, London; Dr. Bateman, London; Mr. W. H. Brown, Leeds; Mr. Birchall, Liverpool; Mr. Barford, Wokingham; Mr. Batley, Halifax; Dr. G. Carpenter, London; Dr. Coghill, Birmingham; Dr. Moss, Congleton; Dr. J. Carroll, Ilkeston; Mr. A. Cooper, London; Miss Crick, Willerby; Mr. Clutton, London; Dr. Chapman, Toronto; Mr. E. T. Collins, London; Sir W. Dalby, London; Mr. A. Duke, Dublin; Mr. Dauber, Liverpool; Mr. Daniels, Llanelly; Dr. E. Davies, Wrexham; Dr. Donholm, Manchester; Dr. W. Downie, Glasgow; Messrs. Debenham, Tewson, and Co., Cheapside; Mr. Ellis, Bishop Auckland; Mr. Earle, Netley; Mr. J. D. Farquharson, Newcastle; Mr. Frost, London; Herr Fuchs, Kissingen; Messrs. Fryer and Coultman; Mr. Freer, Llandudno; Messrs. A. Francke and Co., London; Dr. A. E. Garrod, London; Dr. Gayford, London; Dr. J. A. Gray; Mr. H. B. Gray, Bradfield; Dr. Green, Kidderminster; Mr. J. Hart, London; Dr. Hime, Bradford; Dr. Harkin, Belfast; Surgeon Harper, East Central Africa; Mr. Halcrow, London; Messrs. Hertz and Collingwood, London; Mr. Hornibrook, London; Messrs. Haaluck and Co., London; Mr. T. Inglis, London; Dr. Jessett, London; Mr. M. Jones, Swinton; Mr. G. S. Jacobson, London; Dr. Prosser James, London; Mr. Jameson, Colne; Mr. Kent, Birmingham; Dr. Norman Kerr, London; Dr. Lee, Wollongong, N.S.W.; Messrs. Lloyd and Co., Leicester; Mr. Laffan, Cashel; Dr. S. Martin, London; Mr. D. Morison, Glasgow; Miss Maclaren, Brighton; Messrs. Maythorn and Son, Biggleswade; Mr. Michelmore, Tiverton; Messrs. Mitchell and Co., London; Dr. Mouat, Bedford; Dr. J. K. Murray, Whittlesea, Cape Colony; Dr. Moore, Melbourne; Mr. R. S. Miller, London; Dr. B. J. Merrill, Stillwater, Minn., U.S.A.; Dr. A. E. Morison, Hartlepool; Dr. McDougall, Cannes; Dr. Middendorp, Groningen; Dr. Norström, Paris; Mr. North, Aston; Mr. Newman, Bowness; Messrs. Nevill and Co., Godalming; Mr. A. E. Nevins, Hanley; Mr. Percy, Brainerd, Minn.; Mr. S. Paget, London; Dr. L. Phillips, Birmingham; Dr. K. Roser, Wiesbaden; Mr. Rait, Arbroath; Mr. Rajasingham; Dr. H. T. Rutherfoord, London; Dr. G. Steell, Manchester; Messrs. Shelley and Co., London; Dr. F. J. Smith, London; Messrs. G. Street and Co., London; Dr. H. Snow, London; Mr. Sell, London; Messrs. Street Bros., London; Mr. Scott, Bewdley; Mr. Stewart, Dundee; Dr. G. C. Smith, London; Mr. Saunders, Manchester; Mr. Smith, Westgate-on-Sea; Mr. Scott, London; Mrs. Tomkins, Leicester; Mr. Lawson Tait, London; Dr. W. R. Thomas, Dobeross; Messrs. Thompson and Sons, Leicester; Mr. Torrance, Norwich; Mr. Thompson, Painswick; Dr. C. Turner, London; Mr. Wyman, London; Messrs. Whitworth and Stuart, Manchester; Prof. Wrightón, Downton; Messrs. Wright and Co., Bristol; Dr. Wetherell, Pembury, W.A.; Messrs. Walters and Co., London; Mr. Weaver, London; Mr. Woods, Gillingham; Mr. E. Wingfield; London; Mr. Withers, Shrewsbury; Mr. Walker, Stenhousemuir; Miss Yates, London; Dr. Watson, Glasgow; Sanitary Wood Wool Co., London; F. H., London; Maltine Manufacturing Co., Bloomsbury; Janison, London; Lady Superintendent, Zenana Medical College; Secretary, School of Medicine, Edinburgh; Baths of Homburg; A. C., London; G. G., London; Anglo-Swiss Condensed Milk Co., London; J. C. O., London; Midland, London; University College, Bristol; Veritas, London; M.D., Nice; Reast's Invigorator Co., London; Hippocampus; Disappointed; Inquirer; Signs of the Times, W. H. M.; Athlete; E. R. H., Birmingham; F.R.C.S., Upper Norwood; Physician, Finsbury-circus; Secretary, Chester County Asylum, Macclesfield; A Correspondent; *Midland Counties Herald* Office, Birmingham; Burmah; Secretary, Ancoats Hospital, Manchester; Selby, Birmingham; B. F.

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NEWSPAPERS.—*Islington Gazette, British Financier, Bristol Mercury, Scottish Leader, Vegetarian, National Reformer, Sheffield Weekly Telegraph, Western Mail, Enquire Within, Newcastle Chronicle, Yorkshire Herald, Leeds Mercury, Citizen (Brooklyn), Cleveland Leader (New York), Yorkshire Post, Leicester Daily Post, Melbourne Leader, Times of India, Cape Times, Radical Review, Reading Mercury, Insurance Record, Builder, Local Government Chronicle, Weekly Free Press and Aberdeen Herald, Mining Journal, Windsor and Eton Express, Light, Law Journal, Hertfordshire Mercury, Sanitary Record, Windsor and Eton Gazette, City Press, Architect, Glasgow Herald, Morning Post, North Wales Guardian, L'Echo Française D'Angleterre, Pioneer Mail, Surrey Advertiser, Lincoln Gazette, West Middlesex Advertiser, Guy's Hospital Gazette, Court Circular, Town and Country Journal (Sydney), New Zealand Times, Volunteer Record, Leicester Advertiser, Kentish Mercury, Liverpool Courier, Northampton Mercury, Western Morning News, Hong Kong Telegraph, Wrexham Advertiser, Harrogate Advertiser, Local Government Journal, Scotsman, St. John's Wood, Kilburn, and Hampstead Advertiser*, &c., have been received.

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